THE DOCK & HARBOUR AUTHORITY

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Editorial.

The Port of Palermo.

This month's supplement is devoted to the Port of Palermo, its present activities and future development.

Palermo is situated on the island of Sicily and depends to a great extent upon its activities with Italy, though in one respect —as a port of call—it has a great advantage over the Italian ports, as its situation places it on the direct route from the Western to the Eastern Mediterranean.

Palermo is a comparatively modern port, as construction first took place in the year 1860 and was not finally completed until 1921. The port at this period comprised two moles, one known as the Northern Mole and which was constructed in two different periods, and the Southern Mole.

In 1922 it was decided to extend the port area, as the number of vessels and trade calling there had been showing steady progress. These extensions comprised the construction of an outer breakwater measuring about 600 metres in length, and which would provide a depth of water of 40 metres, chiefly for the use of ocean-going liners. The project also called for the construction of two piers. These extensions are showing satisfactory progress and will be completed very shortly.

The port has been well equipped for ship-repairing and shipbuilding, and a dry dock was laid down with a length of 535-ft. for the purpose of accommodating vessels.

With regard to the traffic of the port, imports have been on a fairly level figure since 1921, when the total tonnage imported was 604,338 tons, whereas in 1930 this figure had risen to 613,258 tons. The chief import of Palermo is coal, though this item has shown big decreases in the last four or five years.

Exports have risen fairly consistently since 1919, although there is an appreciable drop compared with the pre-war figures. Total goods exported in 1921 amounted to 123,146 tons; in 1930 this had reached 159,031 tons. For comparative purposes the tonnage was 240,555 tons in 1911. The principal exports are lemons, which commodity accounts for nearly two-thirds of the total tonnage exported.

An illustrated article appears on another page describing the Port of Palermo and the improvements which are at present being undertaken.

Southampton Docks Extension Scheme making Excellent Progress.

Such excellent progress has been made with the Docks extension scheme on the Western Shore, Southampton, that a big section of the new deep water quay wall has already been completed, and will be ready to accommodate the largest liners within a few months.

The extension scheme included the construction of 7,000-ft. of deep water quay wall alongside which the biggest liners would be able to lie at all states of the tide. About three-quarters of that quay wall has been started, and 1,100-ft. of it is now absolutely finished from foundation to cope.

Of the 400 acres of mudland behind the quay wall something like 100 acres has already been won back from the river, and on that reclamation the foundations of four huge cargo sheds have been started. The superstructure of the first shed is now in course of erection, and in a few months the whole preparations will be completed at the first berth, so that ships will then be able to use it. On the reclaimed land eight cargo sheds will probably be built eventually.

Work on the new graving dock at Millbrook, which is to be the largest in the world, is also progressing at a fast rate. Ordered in January, 1931, the first operation of building an enclosing bank around the area to keep back the tide was completed in June last. Since then the contractors have been pushing on with the utmost speed. The concrete walls are now being put in and it is hoped to get the dock finished by September of next year.

The original idea was to push forward the work so as to have the dock ready to accommodate the 73,000 tons Cunarder, now in course of construction. Although work on that liner has stopped and it is not known when it will be re-started, there has been no slowing up in the construction of the graving dock, and there is every prospect of the dock being ready at the date originally mentioned.

When completed the new dock will hold 270,000 tons of water, nearly three times as much as the present biggest masonry dock at Southampton, the Trafalgar Dock. The Millbrook graving dock will not only be able to accommodate a vessel of the new Cunarder's size, but, if a ship of 100,000 tons displacement is ever built, this new dock will be able to accommodate her.

A big dredging scheme has had to be undertaken in order to give big liners access to the new quay and graving dock. The principal part of this scheme has been the dredging of a new deep water channel two miles in length. This channel will at no part be less than 600-ft. wide or have a depth of less than 35-ft. at low water.

It is interesting to recall in connection with the Docks extension scheme that work was started five years ago. There was then only an enormous stretch of mudland and there was no place to put down a crane or a tool, or any spot where a man could stand. The reclamation of 18 acres of land to furnish a yard in which to work was the first step, and altogether the initial preparations occupied about two years. The big scheme outlined above has therefore been carried out in about three years.

Reductions in Port of London Charges.

The Port Authority have decided to make certain reductions in their charges as from April 1st, 1932. These include a reduction of 7½ per cent. in the dock towage rates on vessels and of 16⅔ per cent. in the charge for water supplied to vessels. The present discount of 5 per cent. allowed off foreign (inward and outward) port rates on goods is altered to 7½ per cent.

The Authority have also decided to adopt revised schedules of import dock charges on wool, wood, meat, cheese, sugar (bulked at landing) and bulk grain discharging.

The total amount of the reductions in charges now decided upon is estimated at about £77,000 per annum.

Record Grain Imports at the Port of Bristol.

A statement of trade issued by the Port of Bristol Authority for the week ended February 27th shows that 927,087 tons of grain have been handled at the port in the 47 weeks of the current financial year. This total eclipses the previous record for the annual import of grain—that of 1924-25—when 924,787 tons passed through the port.

Given a normal influx of grain during the five remaining weeks of the financial year, the notable figure of one million tons will be reached.

Harbour Improvements at Halifax, N.S.

The port facilities at Halifax, N.S., have recently been improved by the installation of a marine tower, or marine leg, for the unloading of grain from incoming vessels. While splendid facilities have for some time past been available for moving grain intended for export, the harbour has lacked equipment for inbound grain cargo. This deficiency has been overcome by the completion on pier 25 of a marine tower capable of discharging 15,000 bushels per hour from grain steamers. This speed compares with 2,000 bushels per hour by hand methods. The tower cost approximately $100,000, and is expected to pay for itself in a year.

Notes of the Month.

Appointment to Port of London Authority.

Mr. Adrian C. Moreing, M.P., has been appointed a member of the Port of London Authority by the London County Council to fill the vacancy caused by the death of Mr. H. J. Greenwood. Mr. Moreing represents South-West St. Pancras on the London County Council and is member of Parliament for Preston.

Barmouth Sea Defence Works.

Work on the Barmouth sea defence works and promenade, which suffered damage by recent high tides and gale, has been restarted. The council have been in consultation with the Unemployment Grants Committee and the Ministry of Health, and an arrangement has been arrived at by which the contractors will pay half the cost of the damaged works and the council will pay the other half.

Launch of Bucket Dredger "Tilbury II."

There was launched on Thursday, March 3rd, from the yard of Messrs. Ferguson Brothers (Port Glasgow), Ltd., the bucket dredger "Tilbury II.," built to the order of the Port of London Authority for service on the Thames. This is the fifteenth vessel built by Ferguson Brothers for the same owners. The dredger is complete with modern machinery and has a double belt drive. The whole of the gearing is of cast steel throughout. There are three mooring winches, two forward and one aft, and a powerful bucket ladder hoisting gear on the port side. Electric light is fitted throughout.

The whole of the machinery has been supplied by the builders. The vessel was launched complete with steam up ready for work. Amongst those present at the launch were Mr. F. E. Ward (representing the Port of London Authority) and Mr. Wm. Adam (resident inspecting engineer).

Application of the New Tariff Regulations.

Following the new Tariff Act which came into operation on Tuesday, March 1st, there were protests from importers that dock dues, porterage and other similar charges were being added to the c.i.f. value of the goods for the purpose of the 10 per cent. import duty. Both Manchester and Liverpool, as well as other ports, were affected by this interpretation of the Act, and representations were made to the authorities. The Commissioners of Customs have now given a ruling to the effect that the duty will be charged only on the c.i.f. value of the goods. It follows from this that in the case of Manchester, Ship Canal tolls, wharfage rates and quay porterage charges will be excluded from the assessment. This clarifies the situation, placing, as it does, all ports on equal terms, and preserves for Manchester the same relative advantage as hitherto. It will be borne in mind that freight rates to Manchester are generally the same as to ports on the seaboard, making the c.i.f. value of the goods the same at Manchester as at Liverpool.

Reduction of Port Charges at Ipswich.

It is a commonplace that dock and harbour authorities in all parts of the country are doing what they can to reduce their charges to merchants and shipowners and thus make their contribution towards that revival of trade which the world needs so badly to-day. The Ipswich Dock Commission have for some time had this matter under their serious consideration, and now find themselves in a position to make certain cuts in the rates levied on ships and goods in addition to those which they were able to make two or three years ago in pursuance of the Derating Act.

On March 26th, 1932 (the first day of the Commission's new financial year) the tonnage duties on shipping and the import and export rates on goods were reduced a further 10 per cent. (making 15 per cent. in all), wharfage was reduced 10 per cent., and the rates of discharging and loading vessels 5 per cent. The aggregate effect of these various cuts will represent a substantial measure of relief to the users of the port.

It may be interesting to note that in respect of the tonnage duties on ships the reductions will bring the charges down in many cases to below the pre-war figure. "Home Trade" ships (with a few unimportant exceptions) will all be charged at less than the pre-war rate, the duties being reduced, in a large class of cases, to as much as 30 per cent. below that rate. The duties on the larger ships from foreign ports will still show a slight increase over the pre-war charges, but the increase is the negligible one of 1.25 per cent. On the smaller vessels from foreign ports the duties will be decreased from 10 per cent. to 27 per cent. below the pre-war level.

New Tug for Barry Docks.

A further instance of the progressive go-ahead policy of the Great Western Railway Company in regard to the equipment of their docks is furnished by the arrival at Barry Docks of a new twin-screw tug, "Windsor." This tug, built by Messrs. Charles Hill and Sons, Ltd., of Bristol, is 90-ft. long and 24-ft. beam and equipped with the latest type of fire and salvage appliances. The vessel is of 800 i.h.p. and replaces the old and smaller tug "Wolfhound," which has rendered good service for many years in Newport and Barry Docks.

Port of Hamburg in 1931.

The official statistics for 1931 just published show the following figures in regard to shipping traffic and the movement of cargo during that year in the port of Hamburg, including the Prussian ports of Altona and Harburg-Wilhelmsburg:

SHIPPING TRAFFIC.

	Inward		Outward		Total	
	No. of Vessels	N.R.T.	No. of Vessels	N.R.T.	No. of Vessels	N.R.T.
1931 ...	20,506	20,870,412	21,952	20,726,031	42,458	41,596,443
1930 ...	20,985	22,438,257	22,947	22,335,049	43,932	44,773,206

The above figures show a decline of 7.1 per cent. in the tonnage entered and cleared in 1931 compared with 1930, but compared with 1929 when the total tonnage was 44,100,000, the decline was only 5.7 per cent. The proportion of German shipping increased from 44.4 per cent. in 1930 to 45.4 per cent.

CARGO TRAFFIC.

	Inward	Outward
1931	14,975,000	8,274,000
1930	16,562,000	9,285,000
1929	19,973,000	9,771,000

Inward cargoes showed a decline of 9.6 per cent. compared with 1930 and 33.4 per cent. compared with 1931. The volume of goods exported declined by 10.9 per cent. compared with 1929.

Development of the Czechoslovakian Free Port in Hamburg.

Plans for the development of the Czechoslovakian free-port area in Hamburg acquired under the Peace Treaty are to be put into hand and the work to be carried out this year includes the building of a bunkering station, a quay wall, administrative buildings and a small repair yard. The free-port boundary is to be fenced in and the material necessary is being sent from Bohemia. Next year the construction of a two-storied warehouse is contemplated.

Kiel Canal Traffic in 1931.

Traffic through the Kiel Canal in 1931 showed a decline of 5,255 vessels and 4,269,731 net registered tons compared with 1930. For purposes of comparison the following figures are given:—

	No. of Vessels	Net. Regd. Tons
1913	53,282	10,348,929
1929	49,090	21,613,088
1930	53,541	22,026,867
1931	48,286	17,757,136

The 48,286 vessels included the following: 21,879 steam and motor vessels aggregating 15,919,882 net registered tons; 24,077 sailing vessels aggregating 1,276,177 net registered tons; 1,042 lighters and barges aggregating 338,447 net registered tons. The number of sailing vessels were approximately the same as in 1930. The vessels were loaded as follows: 188 with passengers, 2,341 with coal, 612 with stone, 630 with iron, 2,816 with timber, 8,141 with grain, 204 with cattle, 7,226 with ore and bulk goods, 11,108 with general cargo, 895 with miscellaneous cargo, and 14,055 empty or in ballast.

There was a decline in cargoes of stone, iron and timber and other bulk goods; coal and grain cargoes showed an increase, while the volume of general cargo was about the same as in 1930. The number of vessels passing through the canal empty or in ballast was much smaller than in 1930.

Bremen's Seagoing Shipping in January.

Sea-going shipping for Bremen account in January amounted to 666,230 net registered tons. This was 22,000 net registered tons, or 3 per cent., less than the previous month and 61,000 net registered tons, or 8 per cent., less than January, 1931.

Sea-borne goods traffic of the five most important Weser ports showed a further deterioration. Imports and exports together amounted to 392,300 tons, against 461,400 tons in December and 446,200 tons in January of the previous year. This is a decrease of 15 per cent. and 12 per cent. respectively. With 263,000 tons, imports lost 50,000 tons, equal to 16 per cent., compared with December and 31,000 tons, equal to 11 per cent., against January, 1931.

In addition to this, exports are falling off also. They only amounted to 129,300 tons and were thus less by 19,000 tons and 22,000 tons, the equivalent of 13 per cent. and 15 per cent. respectively.

Bombay Port Trust

At a meeting of the Trustees of the Port of Bombay held on 10th February, 1932, the following items were disposed of:

The Board considered a representation from the East African Cotton Merchants Association for the provision of bonded accommodation in the Docks for East African cotton intended for re-shipment and decided as an experimental measure and subject to the necessary sanction of the Customs Authorities to reserve the shed known as the "Sales Warehouse," Alexandra Dock, for the storage of East African cotton in bond. The shed will accommodate about 6,000 bales.

With a view to expediting the removal of shut-out cargo from the transit sheds and yards and to remove an existing anomaly in charges, an amendment of the Docks Scale of Rates was approved to provide that shut-out cargo removed from Dock by means of Port Trust labour shall be charged three-quarters of the ordinary wharfage fee for every three days or part thereof. If such cargo is removed within three days, the amendment will result in a slight reduction in charges to the shipper as compared with the full wharfage at present levied.

Imports and exports at the Port of Bombay:—

	1930 Quarter ended 31st December			1931 Quarter ended 31st December		
	Import Tons	Export Tons	Total Tons	Import Tons	Export Tons	Total Tons
Docks ...	414,319	561,318	978,637	354,944	495,219	850,163
,, (transshipment)	15,932	38,574	54,506	19,219	29,480	48,699
Bunders ...	270,776	93,263	364,039	221,465	79,724	301,189
Total	701,027	696,155	1,397,182	595,628	604,423	1,200,051
Total from 1st April to 31st Dec.	2,033,266	2,062,142	4,095,408	1,985,694	1,705,869	3,691,563

Vessels, other than ferry steamers, hired transports, Government vessels and country craft, which entered and left the Port of Bombay.

	1930 Quarter ended 31st Dec.		1931 Quarter ended 31st Dec.	
	Number	Net register Tonnage	Number	Net register Tonnage
(a) Entered:—				
Vessels engaged in foreign trade ...	221	861,617	200	835,970
Vessels engaged in coasting trade ...	627	452,928	603	489,696
Total from 1st April to 31st December ...	1,985	3,639,631	1,944	3,698,409
(b) Cleared:—				
Vessels engaged in foreign trade ...	156	627,167	161	686,413
Vessels engaged in coasting trade ...	683	622,010	643	633,966
Total from 1st April to 31st December ...	1,958	3,590,591	1,951	3,720,090

At a meeting of the Trustees of the Port of Bombay held on February 23rd, 1932, the following were the main items of business disposed of:—

The audited accounts for the half-year ending September 30th, 1931, were approved for submission to Government.

Sanction was accorded to the following items of expenditure:

An estimate amounting to Rs.20,043 for renewing the gallery flooring of No. 8 Shed, Alexandra Dock.

An estimate amounting to Rs.1,900 for fixing four additional bollards at the Ballard Pier and at No. 10 Berth, Alexandra Dock, necessitated by the general increase in the size of vessels entering the port.

Arising out of representations from certain Port Trust contractors supplying miscellaneous stores to be reimbursed for loss occasioned by enhancement of Customs duties, it was decided to amend the standard form of tender so as to provide for reimbursement to the contractor of any Government or municipal duty imposed after submission of a tender and levied on goods supplied under the contract; similarly, provision will be made for a reduction of cost in any cases in which Government or municipal duties are reduced.

At a meeting of the Trustees of the Port of Bombay held on March 8th, 1932, the following lease proposals were approved:—

A 99-year lease of a portion of the corner plot at the junction of Nicol and Wittet roads on the Ballard Estate to the Burmah-Shell Oil Company for a petrol service station.

Two leases for terms of 50 and 10 years respectively of approximately 11,100 square yards of land at Wadala and 4,500 square yards at Wadi Bunder to the Western India Oil Distributing Company for petrol and liquid fuel installations respectively.

Surrender of leasehold Rent Roll No. 684, Apollo Reclamation (area about 2,508 square yards), and the grant of a fresh lease for a term of 99 years at revised rentals.

The Board approved a letter inviting the urgent attention of the Government of India to the serious diversion of the import cotton trade of Bombay, which is threatened as a result of the recently imposed import duty of 6 pies per pound. An importation of not less than 100,000 bales of East African and other foreign cotton is expected within the next few weeks which would normally have been imported via Bombay, hitherto regarded as the natural distributing centre for imported cotton. The newly imposed customs duty, however, has introduced a new factor, as a result of which efforts are being made to divert the whole of this trade in future to Bhavnagar, which State is entitled under special treaty rights to retain the customs duties on any dutiable goods imported into British India via Bhavnagar—an advantage which puts the Port of Bombay out of competition. The Trustees point out that the inevitable result, unless a speedy solution of the problem can be found, will be increasing loss of trade to Bombay, increasing loss of revenue to Government and the State Railways, the Port Trust and the Bombay commercial interests concerned, and eventually an all-round increase in Bombay charges which will lead to further diversion of trade. The Trustees accordingly strongly support the view of the Bombay Chamber of Commerce that, failing any other effective alternative, the new import duty should be immediately removed.

The Port of London Authority

London's Shipping.

During the week ended February 19th, 1,305 vessels, representing 870,782 net registered tons, used the Port of London; 493 vessels (679,841 net registered tons) were to and from Colonial and foreign ports, and 812 vessels (190,941 net registered tons) were engaged in coastwise traffic.

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During the week ended February 26th, 1,047 vesesls, representing 988,489 net registered tons, used the Port of London; 629 vessels (808,310 net registered tons) were to and from Colonial and foreign ports and 418 vessels (180,179 net registered tons) were engaged in coastwise traffic.

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During the week ended March 4th, 892 vessels, representing 900,764 net registered tons, used the Port of London; 526 vessels (724,734 net registered tons) were to and from Colonial and foreign ports and 366 vessels (176,030 net registered tons) were engaged in coastwise traffic.

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During the week ended March 11th, 1,094 vessels, representing 950,147 net registered tons, used the Port of London; 398 vessels (729,338 net registered tons) were to and from Colonial and foreign ports and 696 vessels (220,809 net registered tons) were engaged in coastwise traffic.

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During the week ended March 18th, 758 vessels, representing 783,945 net registered tons, used the Port of London; 369 vessels (594,119 net registered tons) were to and from Colonial and foreign ports and 389 vessels (189,826 net registered tons) were engaged in coastwise traffic.

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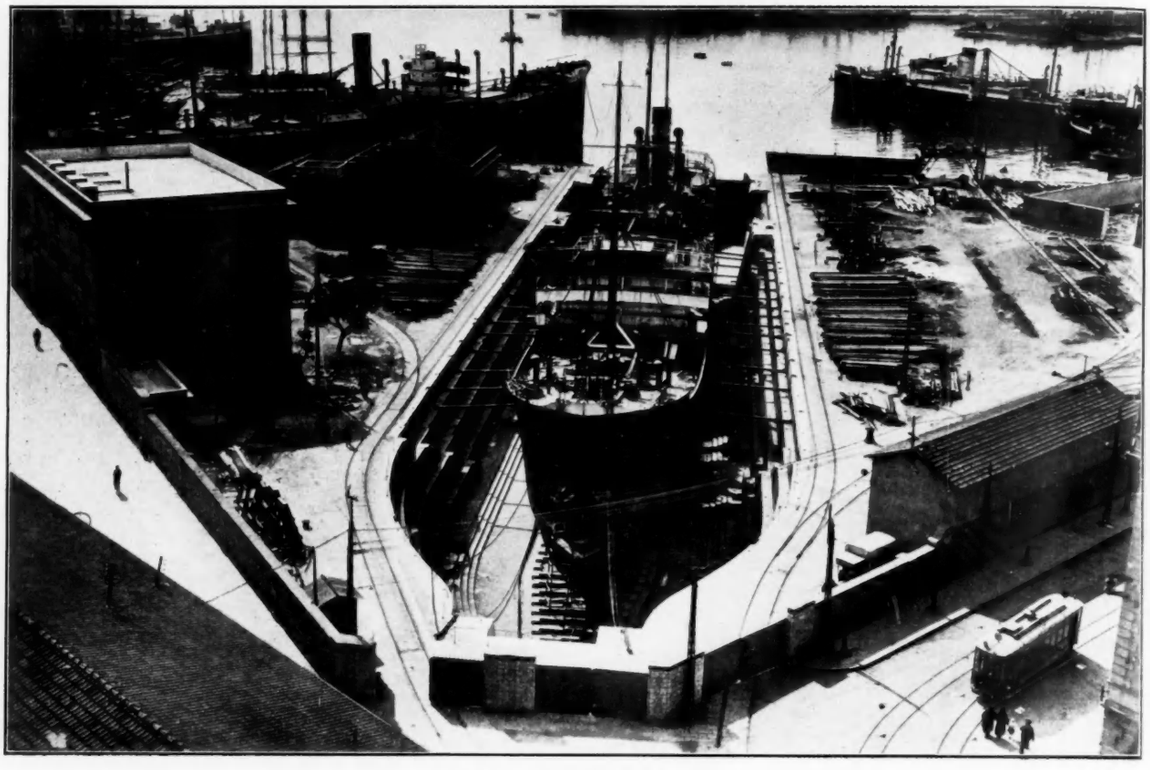
During the week ended March 24th, 722 vessels, representing 780,850 net register tons, used the Port of London; 355 vessels (625,856 registered tons) were to and from Colonial and foreign ports and 367 vessels (154,994 net registered tons) were engaged in coastwise traffic.

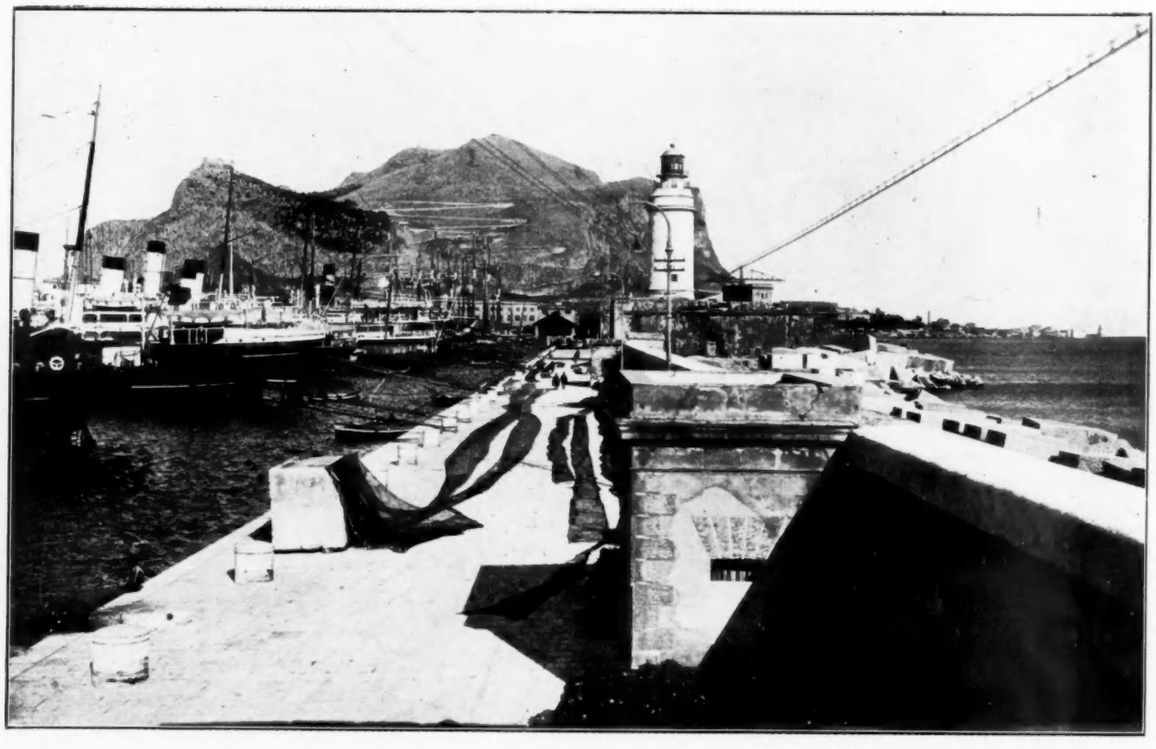
Tilbury Passenger Landing Stage.

Twenty-four vessels totalling 214,855 gross register tons used the Tilbury passenger landing stage during the month of February. Altogether 2,150 passengers were embarked or disembarked at the stage, in addition to baggage and mails.

The Port of Palermo



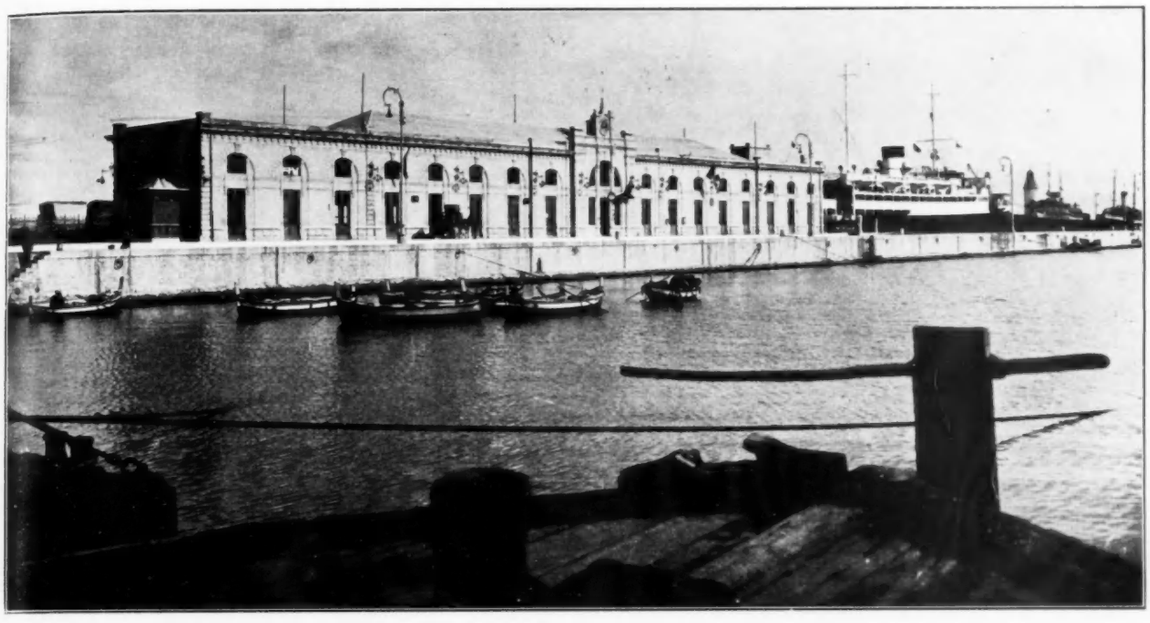
The Palermo Dry Dock.



The North Mole.

The New Port of Palermo and its Future Development

By ANTONIO GIORDANO



Molo S. Lucia.

Historical.

THE TOWN OF PALERMO was founded at the time of the Phoenicians, but until the year 8 B.C. no trace was found of the existence of a port; only at a later date notice is found of Palermo as a refuge port, but in 1445 it was destroyed by a storm. In 1565, under the auspices of Garcia de Toledo, Viceroy of Spain, the first portion of what is at present termed the Northern Mole, was built.

The Port of Palermo is situated in the harbour of Palermo, formed by the Capo Callo and Bagheria point, on 39 degs. 43-mins. latitude and 13 degs. 15-mins. longitude East from Greenwich. The entrance to the port is 300 metres wide.

Construction.

The Port of Palermo was only built after the annexation of Sicily to the Kingdom of Italy, during the period from 1860 to 1921, and the works carried out during these years included the following items: (a) the construction in two periods of the Northern Mole, (b) the construction of the Southern Mole consisting of a breakwater measuring 390 metres in length, and connected to the land by a bridge of 160 metres, (c) the construction of the quayage of the port, (d) the construction of the dry dock, (e) the excavation of the port to a depth varying from 7 to 9 metres, and (f) the construction of two moles. After the carrying out of these works, the Port of Palermo comprised two basins, known as the Northern Dock and the Southern Dock. The harbour facilities of the Port of Palermo starting from the extremity of the Northern Mole to the extremity of the Southern Mole, along the border of the gulf are as follows: (1) disinfection station at the extremity of the Northern Mole; (2) about 510 metres of quayage, along the Northern Mole, with a depth varying from 7.50 to 18 metres; (3) dry dock at the head of the Northern Mole having a maximum length of 175.19 metres; (4) 180 metres of quayage between the dry dock and the end of the shipyard towards the town; (5) ships' repairing works; (6) 460 metres of quayage in the Quattro Venti and Puntone zones with a depth of 7 metres and a mole measuring 45 metres in breadth; (7) 370 metres of quayage on the railway mole; (8) 300 metres of quayage with a depth of 9 metres along the so-called Santa Lucia Mole, where ships employed on the regular daily express mail between Palermo and Naples are anchored. These works form the northern basin, while the southern basin includes the following facilities: (1) the quays "Cala" and "Lupa," giving a length of 300 metres with a depth from 2 to 3 metres; (2) the warehouses, where goods are stored under Custom's supervision at the head of the Southern Mole; (3) 380 metres of quayage, along the Southern Mole at a depth of 7 metres. The total quayage in the Port of Palermo at the disposal of shipping reaches 2,020 metres.

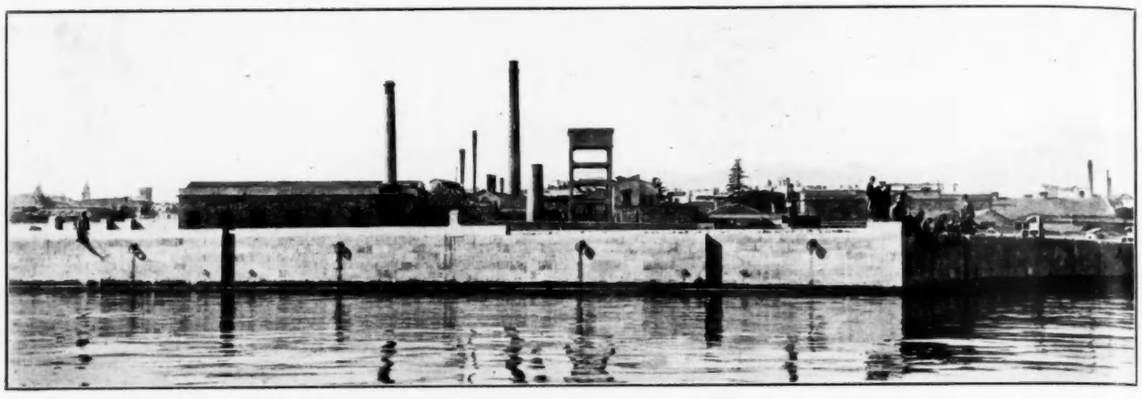
Building a New Port.

After due consideration and having regard to the uninterrupted progress of trade and shipping, the above-mentioned harbour facilities were found to be insufficient to meet the requirements of trade, and consequently it was decided in 1922 to build a new port. The Government allowed a credit of 200,000,000 lire, and the carrying out of this project was given to an Italo-American enterprise known as the S.A.I.M.A. (Società Anonima Italiana MacArthur) in which American capitalists were also interested. The Company had to carry out the following programme of improvements and enlargements:—

(a) The construction of an outer breakwater measuring about 600 metres in length at a depth of 40 metres. This breakwater had to consist of a bed of gravel on which was built the superstructure formed of 1,172 concrete blocks having the following dimensions: 9 x 2.60 x 2.15 metres, each block weighing 120 tons; (b) the construction of two piers and a mole with contiguous quayage to connect the old Santa Lucia pier with the Cala dock; (c) the demolition of the old Fortress of Castellammare, situated between the Cala Dock and the Santa Lucia Pier.

In consequence of difficulties experienced by the S.A.I.M.A. the capital owned by the Americans was taken over by the late Cavaliere Michele Barresi, who was engaged for a long time in other building enterprises in Sicily, and the Società Anonima Italiana Lavori Edili Marittimi was created, under the direct management of Cavaliere Barresi, and later by his son, Francesco Paolo. The S.A.I.L.E.M. commenced work immediately, taking over what had been done by the S.A.I.M.A., and up to the end of 1931, the following works had been completed: (1) over 1,500,000 tons of blocks had been brought from the Mondello quarry, (5 miles from Palermo) by lighters towed by powerful tugs, to prepare the bed of the 600 metres breakwater. The inter-structure was completed in 1929. For the safe keeping of the inter-structure 313 blocks measuring 9 x 2.60 x 2.15 metres were placed on the inter-structure itself. The construction of the superstructure was started in 1929, but has not been completed yet; (2) the former Fortress of Castellammare has been demolished and the material arising from this work has been used for the erection of the so-called Molo Trapezoidale, and for the zone near the entrance to the port, where two piers are to be built; (3) the construction of two piers measuring 320 metres in length and 60 metres in breadth, and the contiguous quay measuring 260 metres in all; (4) the construction of 900 metres of quayage along the Molo Trapezoidale, which has already been built on the zone occupied by the Fortress of Castellammare, and each side of which measures as follows: A — B = 320 metres; B — C = 280 metres and C — D = 220 metres (see Supplement). For the construction of the quayage in the inner part of the port two

The Port of Palermo—continued



The Molo Trapezoidale under Construction.

different types of blocks are being used, blocks of 80 tons and blocks of 60 tons. The depth of water along this mole varies from 6 to 9 metres; (5) 88,000 cubic metres of material have been excavated from the 870,000 cubic metres to be worked according to the project, in the zone between the Molo Trapezoidale and the Santa Lucia Mole, where there should be a depth of 9 metres. A Lobnitz rock cutter is in use.

According to the project which has been planned the zone of the Molo Trapezoidale will have the General Bonded Stores, the Free Port, the Harbour Master's Office and Grain Silos built on it. Definite details of these buildings are not yet available, since it is evident that the construction of the port enlargements must be carried out first.

At present there are about 10,000 square metres of covered area for storage purposes in the Port of Palermo, and the unloading and loading facilities include:

Fixed Cranes.

One of 20 tons on the Northern Mole; one of 2 tons on the Puntone Quay; three of 2 tons on the State Railways Pier; two of 3 tons and two of 2 tons on the Cala and Lupa Quays.

Floating Appliances.

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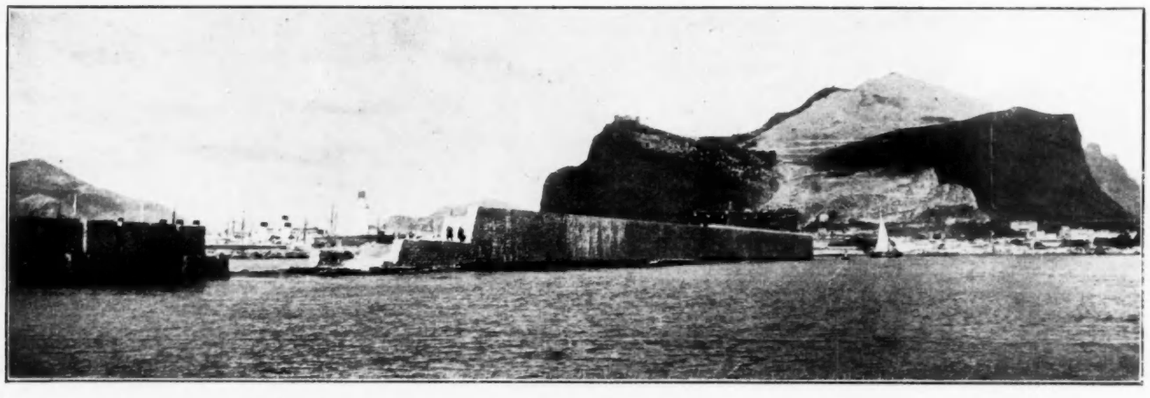
	Italian Flag	Foreign Flags
	Gross Tonnage	
1926	254,000	5,000
1927	200,000	6,100
1928	204,000	7,000
1931	261,000	15,000

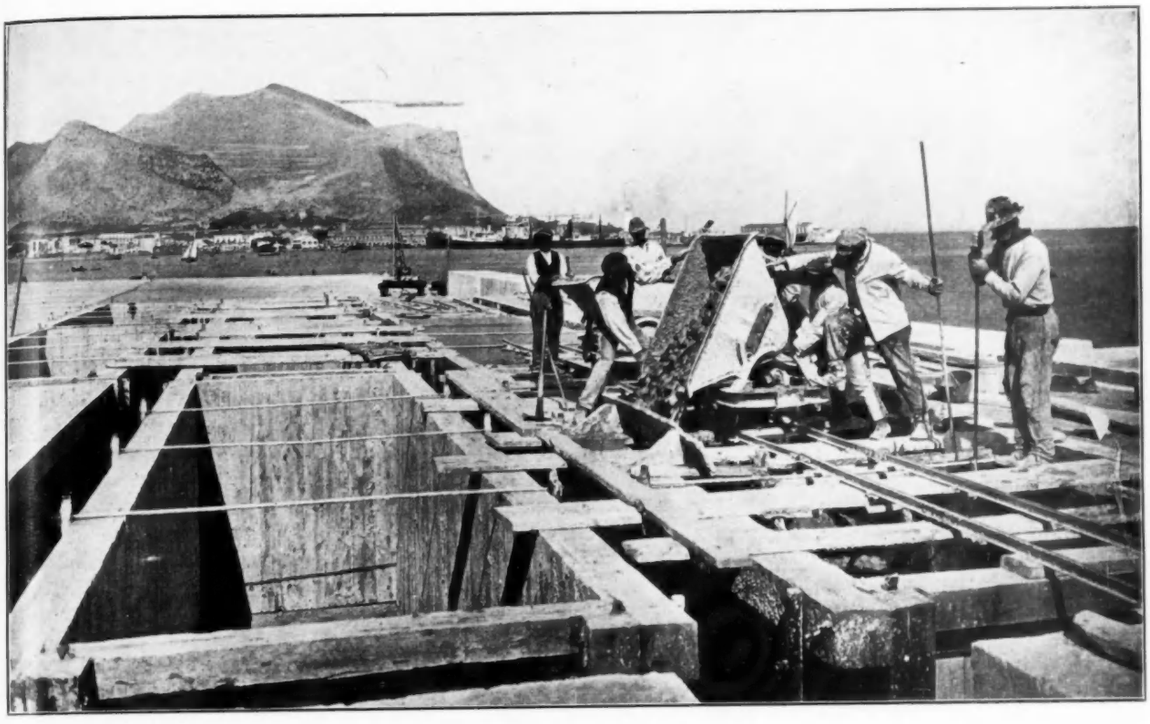
The Dry Dock and Ship Yards.

The S.A. Cantieri Navali Riuniti of Genoa, realising the importance of this activity, have completed the fitting out of the Palermo dry dock and of the 500 metres of quayage on the sea-water front of the yard, where ships to be repaired can anchor stern to quay. The dry dock, which has a length of 535-ft., is fitted with a fixed electric crane of 3 tons and two travelling steam cranes of 6 tons each. The pumping station of the dry dock includes two motor pumps of 250 h.p. each. The dry dock is, furthermore, fitted with plant to supply: (1) electric lighting at 110-volts, (2) electric power with direct current of 110-220-volts, and alternating current at 110-500-volts, and (3) condensed air. The condensed air plant consists of four Ingersoll-Rand air condensers coupled to an electric motor. The total power of these condensers is of 350 h.p. This plant can handle 44,000 cubic metres of air per minute, and compress them at 6 kilograms per square metre, supplying 6,000 cubic metres of condensed air per minute.



The Breakwater, just completed, with Monte Pellegrino in background.

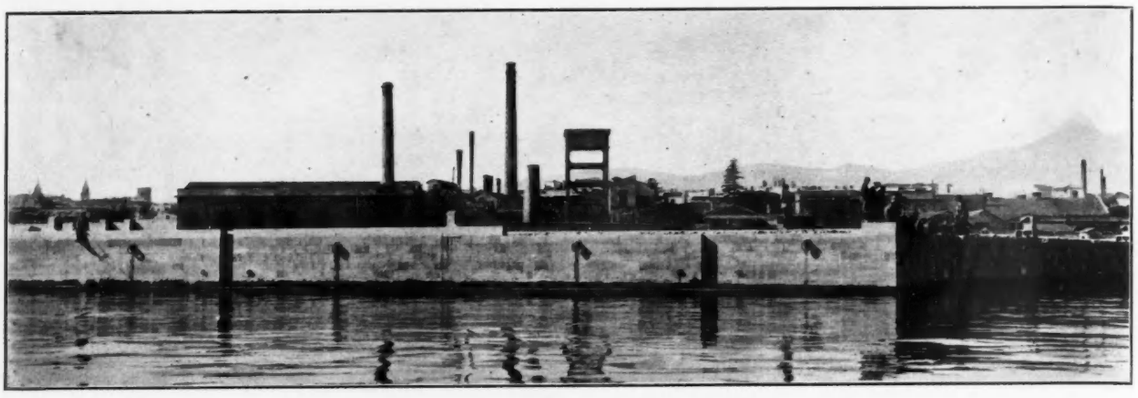
The Port of Palermo



The Breakwater under Construction.

The Completed Breakwater.

The Port of Palermo—continued



The Molo Trapezoidale under Construction.

different types of blocks are being used, blocks of 80 tons and blocks of 60 tons. The depth of water along this mole varies from 6 to 9 metres; (5) 88,000 cubic metres of material have been excavated from the 870,000 cubic metres to be worked according to the project, in the zone between the Molo Trapezoidale and the Santa Lucia Mole, where there should be a depth of 9 metres. A Lobnitz rock cutter is in use.

According to the project which has been planned the zone of the Molo Trapezoidale will have the General Bonded Stores, the Free Port, the Harbour Master's Office and Grain Silos built on it. Definite details of these buildings are not yet available, since it is evident that the construction of the port enlargements must be carried out first.

At present there are about 10,000 square metres of covered area for storage purposes in the Port of Palermo, and the unloading and loading facilities include:

Fixed Cranes.

One of 20 tons on the Northern Mole; one of 2 tons on the Puntone Quay; three of 2 tons on the State Railways Pier; two of 3 tons and two of 2 tons on the Cala and Lupa Quays.

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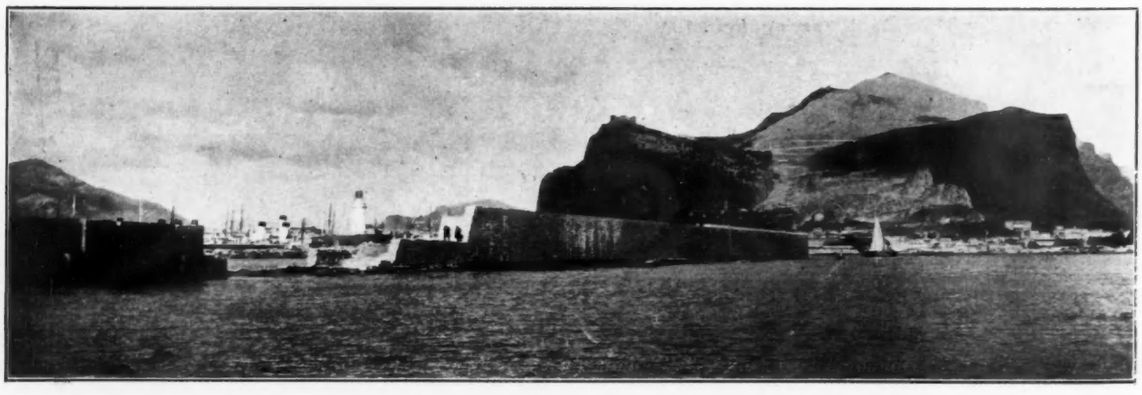
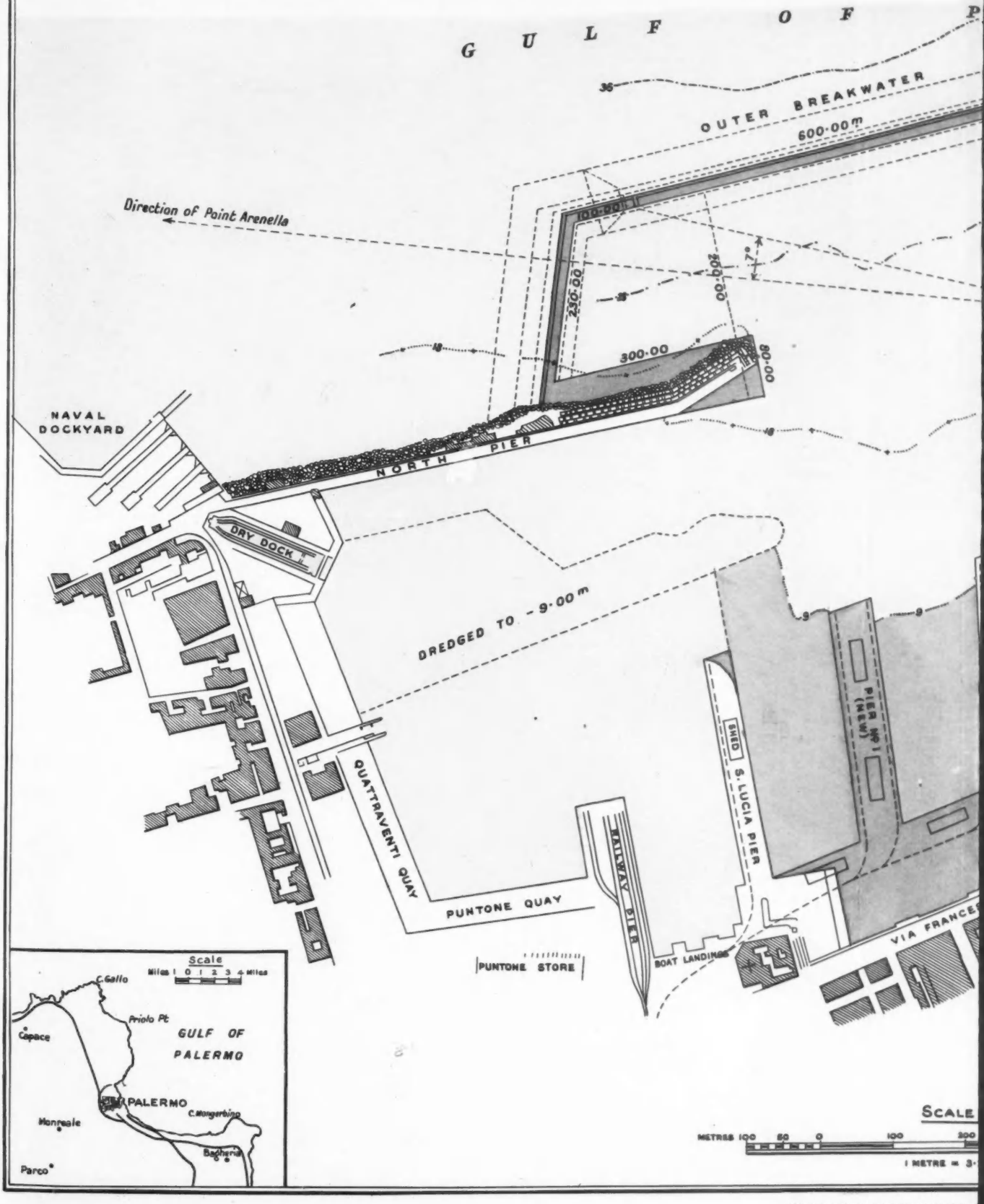


The Breakwater, just completed, with Monte Pellegrino in background.

PORT OF PALERMO.

UNDER THE JURISDICTION OF THE CAPTAIN OF THE PORT OF PALERMO.

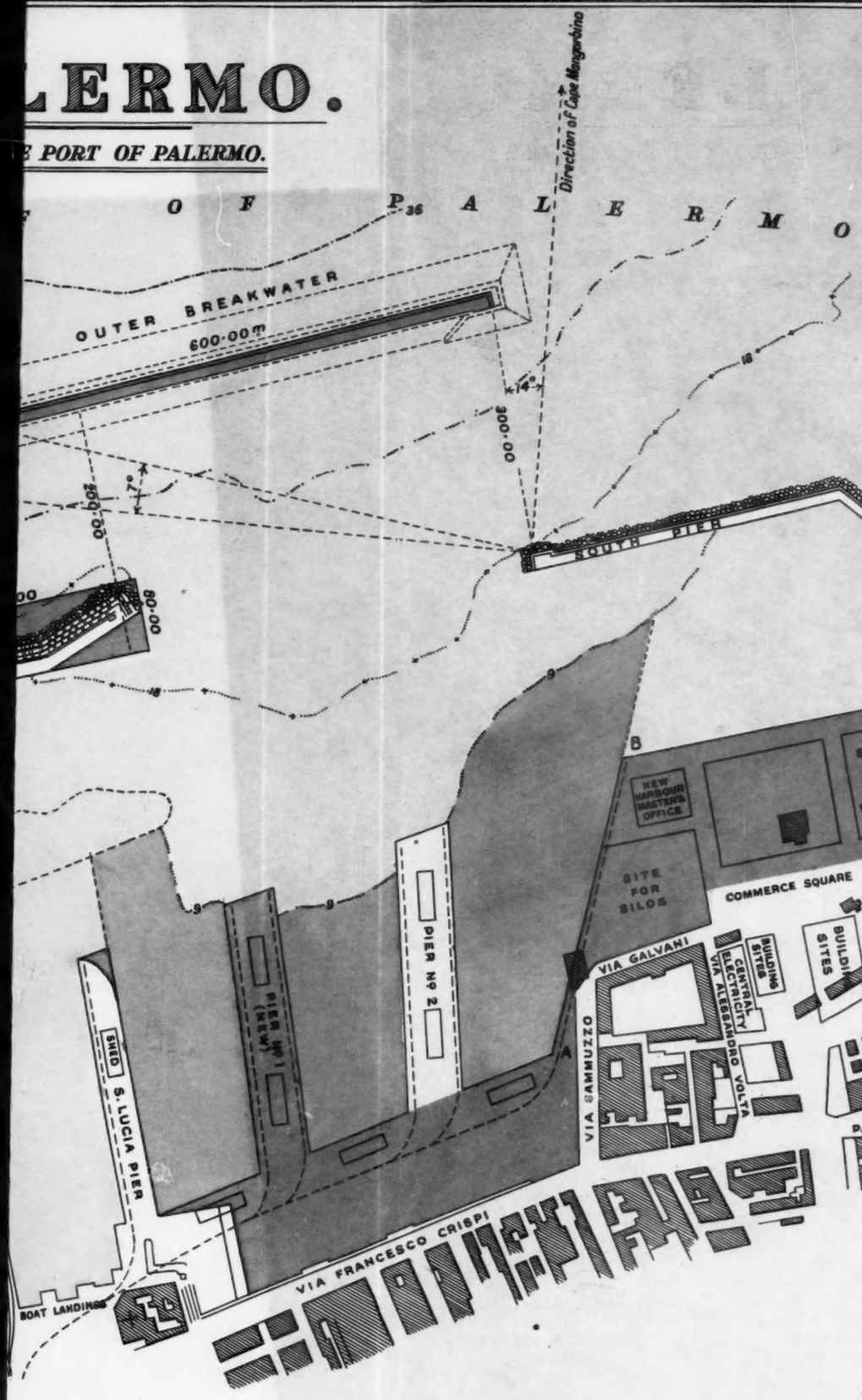


WARD & FOXLOW LTD. (LITHOS.

TO THE DOCK AND HARBOUR AUTHORITY, APRI

LERMO.

E PORT OF PALERMO.



SCALE.

METRES 100 50 0 100 200 300 400 500 METRES

1 METRE = 3·28 FEET.

WARD & FOXLOW LTD. (LITHOS). 19. HARCOURT STREET. W.1.

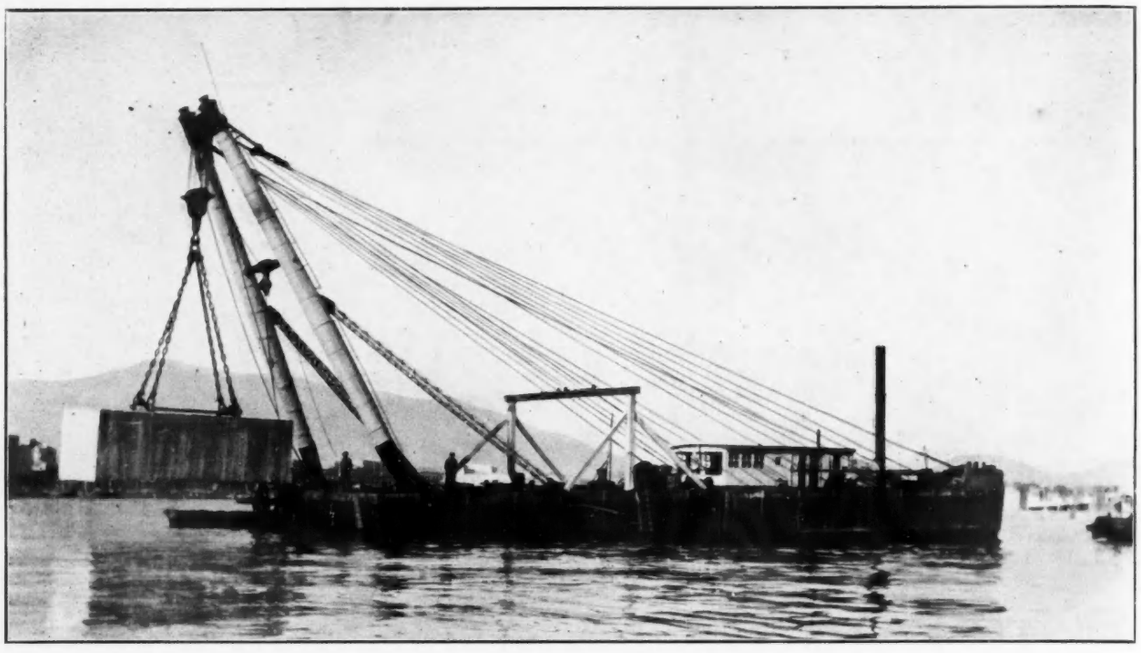
APRIL, 1932.

NOTE.

New Works in hand or completed are coloured RED.

Areas being dredged to -9·00m „ DARK BLUE.

The Port of Palermo—continued



Pontoon Unloading Blocks on Breakwater.

Another problem, to which considerable attention has been paid in the Palermo yard, has been the question of electric welding plant, which consists of four movable sets and two fixed sets. All these facilities are located in a single floor building situated on the sea water front of the quay, so that a few hours after the arrival of a ship for repairs, everything required for the purpose is already on board. A 6-tons bridge crane is now being fitted along the quay.

The shipyards and the engineering works of Palermo, which cover an area of 2,200,000 square feet and the workshops cover an area of 325,000 square feet, have built since 1901, when it was founded, about 200,000 gross tons of merchant shipping, including liners of 8,000 gross tons, such as the "Europa" of the Navagazione Generale Italiana, the motor liner "Città di Genova" and the sister ships of 5,400 gross tons for the Florio Line, besides several cargo boats for private ship owners, and ships for the Royal Italian Navy. The shipyard includes four berths in masonry having a length of 100, 120, 125 and 150 metres, served by seven electric cranes of 3 tons.

Shipping Lines Calling at the Port.

The interest which is being shown by Palermo trading and shipping houses appears to be justified if it is taken into consideration the geographical position of the port, and it seems to be shared by the international shipping community since Palermo has been included in the schedule of the following lines as a regular port of call:

Italian Lines. (a) Subventioned mail services: Florio Line; La Meridionale.

(b) Subventioned freight services. Adria Line; Tripcovich Line.

(c) Free tramp services. Società di Navigazione Alta Italia—Creole Line—Cosulich Line—Navigazione Libera Triestina, Italia, Società di Navigazione.

Foreign Lines:—British—Cunard Steamship Co., Ltd., London; Ellerman Line, Ltd.; Westcott and Laurence Line; Ellerman's Wilson Line; General Steam Navigation Co., Ltd.; Herbert Watson and Co., Ltd.; John Bruce and Co., Ltd.; John Glynn and Son; The Golden Cross Line; Whimster and Co.

German—Deutsche Levant Linie and Orient Dienst; Rob. M. Sloman, Jr.

Norwegian—Det Nordenfjeldske Dampskibs-selskab; Spanskelinien D/S, A/S.

Danish—Det Forenede Dampskibs Selskab; J. Lauritzen.

Swedish—Rederiaktieb Svenska Lloyd.

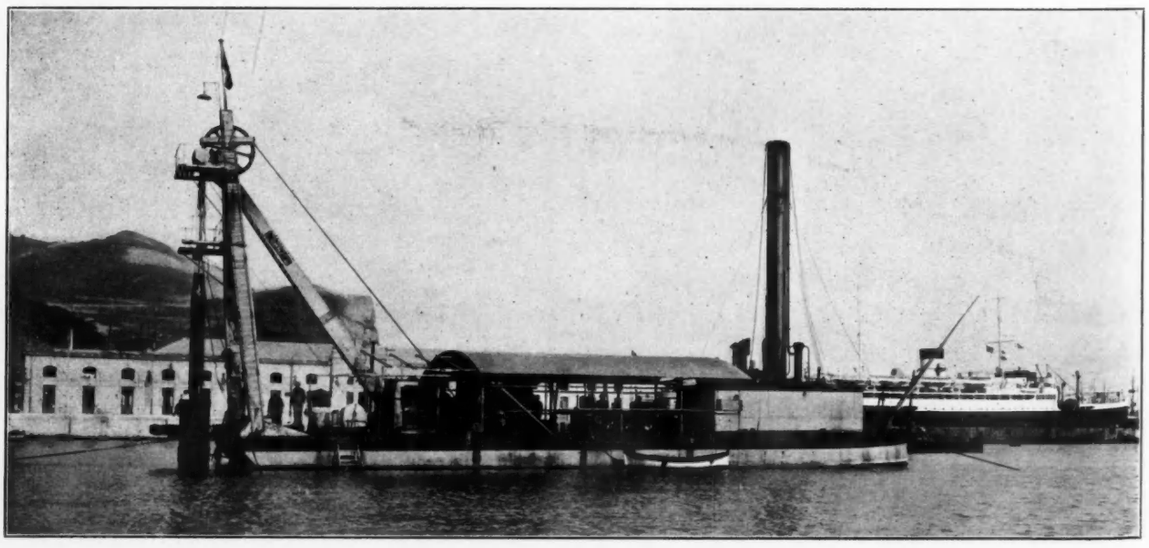
Dutch—Nederland Royal Mail.

Spanish—Ybarra and Co.

French—Fabre Line.

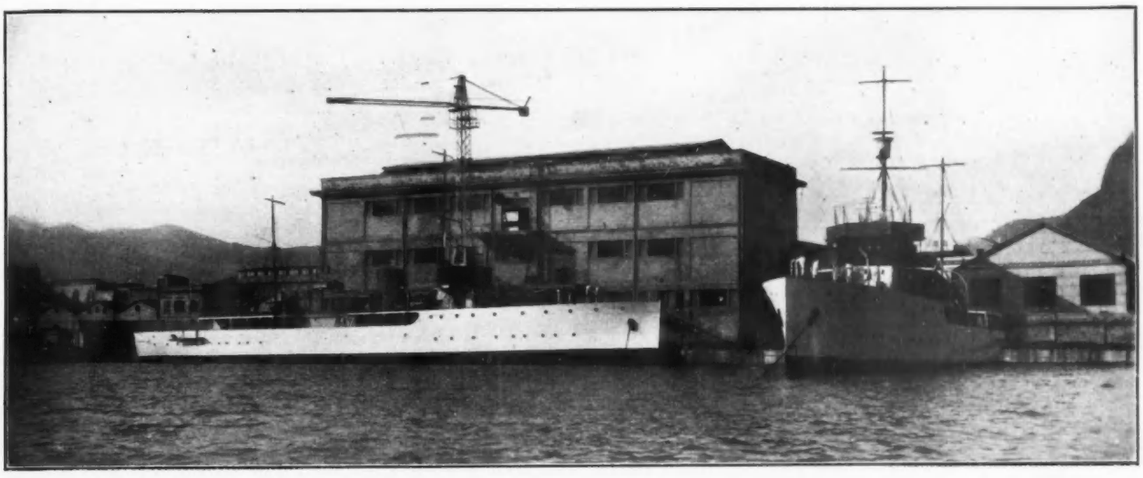
American—American Export Lines.

(Continued on page 184)

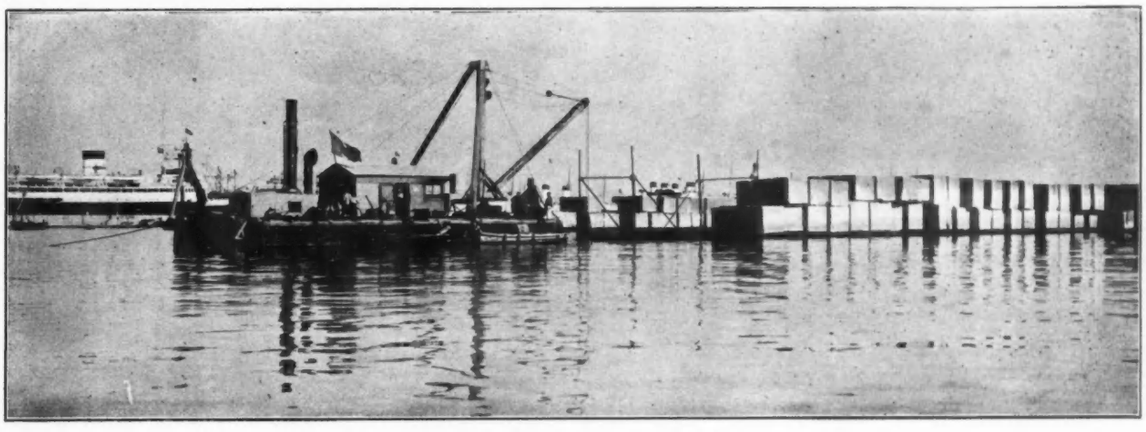


The Lobnitz Rock Cutter at Work.

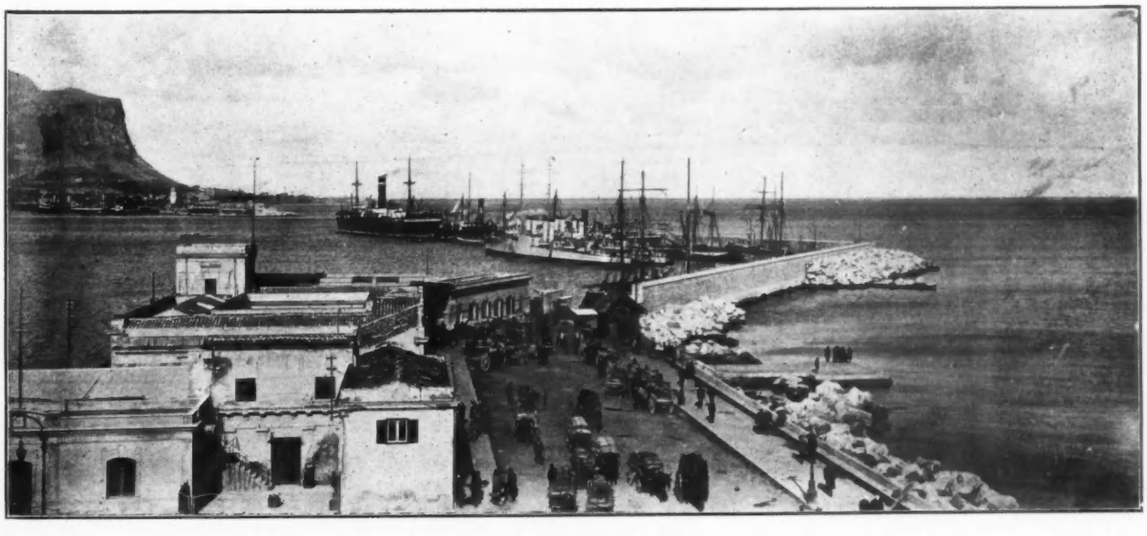
The Port of Palermo



The Fitting-out Quay of the Cantieri Navali Riuniti.



Construction of the Central Mole.



South Mole.

French Harbour Matters

THE Chamber of Commerce of Boulogne-sur-Mer has taken up the question of the reorganisation of the port, and at one of their recent meetings was discussed, among other things, the question of replacing the steam cranes on the Chanzy Quay and on the main basin by electric cranes, and to place some new electric cranes on the wooden quay of the maritime railway station. Furthermore, it has been decided to improve the ships' repairing facilities by mounting an additional electric generator to supply the necessary power for the operation of the condensed air and electric welding plants. Finally it has been decided to accept the proposal of the Ministry for Public Works, according to which the Boulogne Chamber of Commerce should participate in the proportion of one-third to the purchase of a new dredge, the cost of which has been estimated at 17 million francs. However, it has been decided to ask the Government to assign the new dredge definitely to the Port of Boulogne.

At Le Havre the mounting of new electric cranes to replace the old steam cranes on the Escale Quay has been proceeding satisfactorily.

The Rouen Harbour Board has published statistics concerning shipping at that port during the month of February, 1932, and which is summarised as follows:—

	FEBRUARY	
	1932	1931
Ships arrived	276	319
Imports of goods (Tons)	477,555	652,787
Ships cleared with cargo ...	85	87
Exports of goods (Tons)	58,168	50,601
Total traffic	535,724	703,388

In order to obtain an idea of the situation of shipping at Rouen it may be interesting to examine the main items of the import trade at that port, which are as follows:—

	Tons	Tons
Coal	562,917	833,435
Oil	218,273	178,636
Wines	94,996	105,062

It will be seen that coal imports have shown a large decline, but, taking into consideration the fact that certain import restrictions on coal have recently been lifted, there is reason to believe that matters will improve in the course of the next few months. However, the Chamber of Commerce operating the port has recently considered the question of carrying out additional harbour improvements. In this connection it has been decided to proceed with the development of the land behind the central mole of the basin of the Prairies St. Gervais and to carry out further dredging works at the Seine mouth.

Two electric cranes of 3 tons capacity have been placed on the Vendeuvre Quay at Caen in order to speed up unloading operations.

It is stated that the new maritime station at Cherbourg is to be ready for opening in January, 1933. By the end of April, 1933, it is expected that the entrance from the coast will have been dredged to a depth of 9 metres. The new maritime station will afford room for two large and four small liners, and, though the depth of 9 metres will provide a sufficient depth for the present, there is a project viewing the increasing of the depth of water to 13 metres.

The question relating to the construction of the new ports of Saint Malo-Saint Servain and of Dinard has been settled. Two-thirds of the cost of the new works will be borne by the Chamber of Commerce of Saint Malo itself, though there is no doubt that it will be necessary to raise loans and to establish new charges to secure the necessary funds to carry out these works.

At other ports such as Nantes shipping during the month of February has also shown a decline, as will be seen from the following statistics:—

	1932	1931
Net reg. tonnage	235,933	286,221
Goods unloaded & loaded (Tons)	180,880	236,925

Shipping during the first two months has been about the same, as the following schedule shows:—

Net reg. tonnage	486,184	631,402
Goods unloaded & loaded (Tons)	375,941	498,713

The following figures show the imports and exports at the Port of Nantes for the year 1931, as compared with the year 1930:—

	Imports		Exports	
	1931 Tons	1930 Tons	1931 Tons	1930 Tons
Coal	990,501	989,793	51,773	29,574
Pitch	23,487	19,263	—	—
Ore	700	—	140,865	232,655
Iron and Steel	22,564	29,777	5,956	6,472
Asphalt	10,064	21,390	250	—
Pyrites	57,563	84,535	31,800	39,447
Phosphates ...	157,457	208,553	440	5,958
Sulphate of Ammonia ...	4,485	7,411	—	—
Nitrates	39,818	33,952	—	—
Kaolin	3,892	3,619	—	—
Building Materials	30,741	29,659	109,989	56,530
Essence (for motor cars) ...	36,552	27,243	175	
Petroleum	8,198	6,239	—	—
Wood	28,787	29,564	—	—
Pitprops	—	—	—	3,914
Woodpulp and Paper ...	20,448	19,270	1,568	2,231
Oilseeds	17,716	15,111	—	—
Oilcakes	—	—	3,020	3,601
Bananas	9,964	—	—	—
Cereals	87,836	23,112	3,598	57,387
Rice	28,768	9,816	—	241
Sugar	45,974	50,194	5,919	4,786
Salt	3,141	3,103	—	—
Wine and Rum	136,529	114,199	17,201	14,540
Various	83,325	87,709	108,516	121,304
Totals	1,848,510	1,813,512	481,070	578,640

According to statistics which have just been published by the Chamber of Commerce of La Rochelle Pallice, shipping at that port during the month of February, 1932, totalled 75,917 tons, comprising 74,462 tons of goods unloaded and 1,455 tons of goods shipped, making a total increase of about 9,000 tons compared with 1931. During the first two months of 1932 shipping at La Rochelle Pallice totalled 150,159 tons of goods, showing an increase of 21,510 tons over the corresponding period of 1931.

According to a decree which has been published by the "Journal Officiel," the harbour of Port Vendres, which is the transit centre of the trade between Western France and Algeria, is to be operated in future by the Chamber of Commerce of Perpignan, instead of the Port Vendres Town Council. The Chamber of Commerce of Perpignan has been authorised to collect the charges (droits de péage) to pay (1) the subsidy of about 3 million francs, which the Port Vendres Town Council has declared to be ready to grant for the carrying out of harbour improvements and enlargements at Port Vendres; (2) the contribution of the Chamber of Commerce of Perpignan to the dredging works to be carried out at Port Vendres to increase the depth of water to 8 metres, and finally (3) the cost of the loan, which the Chamber of Commerce of Perpignan may be authorised to raise should the amount of taxes to be collected be insufficient to cover the cost of the above-mentioned works.

Marseilles can be considered as the port which has less suffered from the crisis, as will be noticed from the following figures concerning shipping at that port during the first two months of 1932 compared with previous years:—

	1932	1931	1913
ARRIVALS.			
Number of ships	1,159	1,203	1,298
Net reg. tonnage	2,311,131	2,345,845	1,561,109
Goods (Tons) ..	666,159	689,780	830,323
Passengers ...	32,464	31,573	28,189
CLEARANCES.			
Number of ships	1,173	1,203	1,294
Net reg. tonnage	2,319,260	2,352,235	1 575,592
Tons of goods ...	321,024	359,465	464,311
Passengers ...	30,914	32,723	31,035

There has been a decline in imports in respect to 1931, and this fact is chiefly due to the depression of trade with the Levant, Aegean and Black Sea ports, which has always had an important influence in connection with the development of shipping at Marseilles.

It has been mentioned that the French Government has reduced the allowance made to enlarge the Port of Kenitra from 130 to 80 million francs. This rumour has been denied, but there is no doubt that some of the construction has been adjourned, and that only a portion of the harbour enlargements will be carried out, these being with a view to facilitate the unloading, loading and storage operations. The increase of shipping, in spite of the general economic crisis, causes a need for better facilities, as ships are unavoidably delaying their despatch. Also further dredging works are considered necessary. At Casablanca it has been decided to increase by about 550 metres the large jetty of the port, and the construction of a quay to be used for the coal trade has been commenced. When completed the quay will be fitted with two electric coal elevators having a capacity of 300 tons per hour. It is expected that the extension of the jetty will increase the efficiency of the port from a safety point of view. For the carrying out of these works a credit of 210 million francs has been allotted.

Scottish Harbour Notes

Bo'ness Dock. The L. & N. E. Rly. Co.

Clyde Navigation Trustees and Improvements to River Clyde.

IT was demonstrated by Mr. A. C. Gardner, in an address that he recently gave to the members of the Institution of Engineers and Shipbuilders in Scotland at Glasgow, that the Clyde Navigation Trustees, despite the industrial depression, have been endeavouring to maintain the great traditions of the River Clyde by continuing to improve the river and the facilities of the port. Mr. Gardner confined his paper to works which had proceeded simultaneously with the construction of the King George V. Dock at Shieldhall, although he did not deal with the construction of that dock itself. He pointed out that the Stobcross Quay had been the scene of a notable development—the construction of the 175-ton cantilever crane. This crane had been erected to replace the present 130-ton steam crane on Finnieston Quay in view of the demolition of the present crane being rendered necessary by the proposed bridge at Finnieston. The new crane (which was situated 536-feet west of the centre line of the proposed bridge) was electrically operated and was of the hammer-head cantilever type with two hoists. The main hoist had a maximum lifting capacity of 175 tons at 85-ft. radius, and was also capable of lifting 80 tons at the maximum radius of 144-ft. The auxiliary hoist had a maximum lifting capacity of 30 tons at a radius of 148-ft., while the revolving portion of the crane was carried on a tower 45-ft. square.

Kingston Dock Swing Bridge.

In outlining the work that had been done recently to strengthen the foundations of Kingston Dock swing bridge, Mr. Gardner pointed out that the bridge was provided to maintain street traffic between the Windmill-croft and Springfield Quays when the dock was constructed in the year 1867. The bridge rotated about a centre on the east side of the entrance to the dock, and had a cantilever arm reaching to the west side, with a back balance to obtain equilibrium. The total revolving weight of the structure was approximately 360 tons. The superstructure was of wrought iron, and Mr. Gardner added that it was still in a wonderfully good state of preservation. The speaker added that considerable improvements had also been carried out at the Clyde Trust's No. 3 graving dock, which was the largest dry dock on the Clyde, and advantage had been taken of the slack period due to trade depression to have the dock improved during the summer of 1931. The work comprised the removing and cleaning of the granite paving setts; the cutting away of the concrete to a depth of at least 20-in. over the whole area to be lowered; the facing of this area with new concrete; the repaving of the floor, and alterations to the drainage and emptying culverts.

Meeting of Glasgow Chamber of Commerce.

At a recently held meeting of the Glasgow Chamber of Commerce a letter was read from the Liverpool Steam Ship Owners' Association enclosing print of report which had been adopted unanimously at a general meeting of that association, together with a copy of the following resolution which had been unanimously adopted: "That the Liverpool Steam Ship Owners' Association, having in mind the importance of the United Kingdom of the transhipment trade, urges upon His Majesty's Government the vital necessity of ensuring, in the event of an introduction of a general Customs tariff on imports, the provision of adequate free port areas in the ports of the United Kingdom so as to enable the discharging, loading and handling of transhipment cargo to be carried on in such ports free from all control by the Customs." The Secretary reported that he had communicated with the Clyde Steam Ship Owners' Association and the Glasgow Shipowners' Association, and these associations had passed similar resolutions; while the Secretary further reported that the Chancellor of the Exchequer recently stated in the House of Commons that conditions had grown up in the ports of this country in such a way as not to make them readily adaptable to a system of free ports. After discussion, and having regard to the fact that provisions had been made in the Bill regarding goods imported with a view to re-exportation, it was resolved not to make any recommendation in connection with the matter.

Eyemouth Harbour.

Although only dredged a year ago, it is reported that between seven and eight thousand tons of sand have again accumulated in the fairway of Eyemouth Harbour, and this has been causing much delay and inconvenience to shipping and fishing. Recently one of the many fishing boats at this port, when proceeding to sea, grounded in the sand, and that nearly at high water, and it was only with great difficulty that this boat was refloated, otherwise the bar would have been blocked, and thus prevented the fishing fleet from leaving the port. Naturally this situation of affairs has been causing much concern to the Eyemouth Harbour Commissioners and to the fishing community generally, and it is the universal feeling that the only remedy is the construction of groynes at certain points, which would prevent the sand from gathering anywhere near the harbour entrance-way. It is reported that Mr. J. H. F. McEwan, the member of Parliament for Haddingtonshire and Berwickshire, is taking a very keen and personal interest in this matter, and he has offered to arrange a garden fête within his policies at Marchmont to assist in raising funds for this scheme. There is a general feeling that such a scheme is now absolutely imperative, and that the sooner this scheme is undertaken the better for this port.

Scottish Harbour Notes—continued

Granton Harbour.

In the latest list of new joint stock companies registered in Scotland appears the name of Granton Harbour, Ltd. Under the new registration this undertaking is turned into a private limited company having as its subscribers the Duke of Buccleuch and Queensberry and the Earl of Dalkeith, M.P., and the nominal capital of the new company is given as £100,000 in £1 shares. The memorandum of association indicates that among the objects for which the company is established are the purchase and acquisition from the Duke of Buccleuch of certain estates in the County of Edinburgh, and particularly the undertaking of the Harbour of Granton; and all the powers and privileges pertaining to it, vested in the Duke of Buccleuch by Act of Parliament or otherwise, and the whole property and assets. The new company has powers to manage and develop the estates and harbour and the other properties; to acquire other businesses or property; to purchase lands and buildings; to construct buildings; to acquire patents and shares; to work mines; and, amongst other things, to sell or lease the company's property.

Attempt to save Lybster Harbour.

There is a determined effort now being made to save Lybster Harbour, Caithness, by safeguarding the main quay from destruction and removing from the basin an accumulation of silt which is seriously restricting fishing operations. It is proposed to convey the harbour from private ownership to a statutory body to be known as " Lybster Harbour Society, Limited." This society will be eligible to receive Government assistance, but a proportion of the money required for the harbour improvements will have to be found by Lybster people and friends. The Lybster Harbour Committee are therefore issuing an appeal for funds to traders doing business with Lybster. The appeal (which is signed by Captain Mowat, convener, and Mr. J. Gunn, secretary and treasurer) points out that the white-fishing industry in Lybster is showing evidence of revival, and that repairs to the harbour are urgently required.

Satisfactory Progress being made with Reconstruction Work at Inverness.

Members of Inverness Harbour Board were informed at a recent meeting that satisfactory progress is being made with the reconstruction scheme at the harbour. Following the reading of correspondence between the engineer and the contractor on the subject of dredging (submitted for the information of the Trustees), Provost Macdonald said it did not matter which type of dredger was used so long as the work was properly done. Another member said they had considered a bucket dredger would be best, but (as the Jarrow Dredging Company explained) they could not replace the hopper dredger at present in use by a bucket dredger without adding £600 or £700 to the cost. The work specified would have to be done, however, before the contract was completed. It was reported that the amount of dues for the past 21 weeks was £1,408, as compared with £1,325 for the corresponding period last year, thus showing an increase.

Graving Dock Charges at Glasgow.

At a recently held meeting of the Clyde Navigation Trustees the Harbour Committee reported that letters had been submitted from Messrs. Alexander Stephen and Sons, Ltd., the Blythswood Shipbuilding Co., Ltd., and the Fairfield Shipbuilding and Engineering Co., Ltd., with regard to the charges for the use of the Trustees' graving docks in competition with the charges for the private graving docks belonging to Messrs. Barclay, Curle and Co., Ltd., and Messrs. D. and W. Henderson and Co., Ltd. The Committee instructed the general manager to confer with representatives of Barclay, Curle and Co. and D. and W. Henderson and Co. on the matter and report, and this report was adopted by the Trust. The Trust also adopted a recommendation by the Harbour Committee that the Shieldhall light (situated at the east end of Shieldhall Wharf) should be discontinued. The harbour master's report was that the light was no longer necessary in the interests of navigation, in view of the new lights on Shieldhall Riverside Quay and the powerful pierhead lights at the entrance to King George V. Dock.

Clyde Navigation Trustees and Request for Cheaper Stevedoring Charges.

At the same meeting of the Clyde Navigation Trustees it was reported that, in consequence of the reduction in the wages of dock labour, the Rating Committee had considered a request for the lowering of the stevedoring charges at Meadowside Granary. The Committee were of the opinion that the amount of saving to the Trustees by this reduction of wages would be passed on, and to give effect to this it was recommended that the tonnage charges payable by the shipowner for discharging grain, flour, etc., and by the importer and/or receiver for receiving and delivering grain, flour, etc., at Meadowside Granary and shed (berths 2 and 3, Meadowside Quay), including extra services other than labour charges based on current wages, be reduced by 2 per cent., and that no reduction be made in the charges for storage. This recommendation was approved. The Rates Committee further reported on a request from the Clyde Steam Ship Owners' Association and others for a further modification of the minimum charges for the use of the coal cranes. The Committee decided that they could not see their way to recommend any further modifications than those which had already been allowed, and the Trustees approved.

Meeting of Clyde Lighthouse Trustees.

An echo relative to the stoppage of work on the new Cunard liner at Clydebank was referred to at a recent meeting of the Clyde Lighthouse Trustees, when the minutes showed that the Committee of Management and Finance had decided that the steps which the Trustees were taking for the widening and deepening of the channel (to allow the passage of the vessel down the river) should meantime be suspended. Mr. George Sloan (Chairman) said that, according to the newspapers, the Government had refused to assist the Cunard Company and the Trustees would require to await developments. They had been making arrangements for the necessary dredging, but, as the launch had been delayed, they were making no further preparations in the meantime, and were just resting on their oars. It was reported that the revenue of the Trustees for the five months ending February showed a total of £5,033, as against £6,700 for the corresponding period in the previous year, representing a deficiency of £1,667. Of this sum £1,037 was due to the extra discount that was given a year ago, but, when they considered the times in which they were living, he (Mr. Sloan) did not think that the Trustees had much reason to complain.

The Port of Konigsberg

Shipping Statistics for February

United Kingdom and Foreign Shipping.—Arrivals during the month totalled 89 vessels of 33,359 tons; United Kingdom one of 589 tons. Departures: 101 vessels of 41,559 tons; United Kingdom one of 589 tons.

Incoming Cargoes.—Principal incoming cargoes, excluding those from the United Kingdom: Soy groats, 3,920 tons; petroleum, 1,200 tons; grain, 1,000 tons; German coal, 16,270 tons; German coke, 700 tons; Polish coal, 700 tons; sawn timber, 660 tons; precious wood, 770 tons; general cargoes, 29,850 tons.

Outgoing Cargoes.—Principal outgoing cargoes, excluding those to the United Kingdom: Grain, 5,139 tons; cellulose, 3,732 tons; sawn timber, 700 tons; general cargoes, 51,532 tons.

United Kingdom Cargoes.—Incoming cargoes from the United Kingdom comprised: Coal, 540 tons; coke, 600 tons; herrings (full barrels), 1,465; herrings (half barrels), 339, and were conveyed in the following vessels:—

	No. of Vessels	N.R.T. of each Vessel	Total of N.R.T.
Germany	1	410	410
Holland	1	265	265

(The one U.K. vessel arrived in ballast).

Outgoing cargoes to the United Kingdom comprised: Cellulose, 6,430 tons; scrap iron, 288 tons; peas, 116 tons; general cargoes, 996 tons; boards, 126 cb. m.; and were conveyed in the following vessels:—

	No. of Vessels	N.R.T. of each Vessel	Total of N.R.T.
United Kingdom ...	1	589	589
Germany	1	370	
	1	636	
	1	494	
	1	1,218	
			2,718
Sweden	1	845	845

Transit Trade in Cereals and Leguminous Products.—Transit trade in these products totalled 4,395 tons, as follows:—Lentils, 2,730 tons; peas, 795 tons; beans, 210 tons; vetches, 180 tons; clover seed, 135 tons; oil cake, 45 tons; rape and rape seed, 45 tons; maize, 105 tons; linseed, 30 tons; grain, 120 tons.

The Grouping of Mersey Ports

Reconciling the Rivalries of Liverpool, Manchester, Garston and Bromborough

DISCUSSING this subject at the Manchester and Liverpool Section of the Institute of Transport, Mr. R. J. Hall said: "One of the recommendations of the Royal Commission on Transport states: 'It would appear to be largely in public interest that Harbour Boards should not be confined to single ports, but should control all the harbours in a particular district.'

"In conformity with that authoritative statement, I would invite you to consider its application to the four ocean ports on the Mersey, viz., Liverpool, Manchester, Garston and Bromborough. These Mersey ports should be regarded as one economic unit, for they are one maritime community. In my opinion, this can be accomplished by grouping these ports under one central board of administration on such a basis of representation from each port, as may be subsequently decided upon.

"The improvements effected by the grouping of the dock companies on the Thames, under the Port of London Authority, is well known. A grouping of ports in South Wales has since taken place, and the ports of Cardiff, Swansea, Newport, Barry, Port Talbot and Penarth are now directed by the Board of the G.W.R. The records in each instance furnish clear evidence in favour of a similar grouping of interests on the Mersey, and if that was achieved they would constitute the largest dock system in the world.

"Each of the four big ports on the Mersey possesses exceptional natural advantages of their own. They were each built for a specific purpose. These four ports are within a radius of forty miles, as it may be claimed that they are within the command of one executive.

Merits of the Four Mersey Ports.

"The Port of Liverpool is situated within the boundaries of Liverpool, Birkenhead, Bootle and Wallasey, and has its entrance in the Irish Sea. It is essentially a liner port and has deep water docks and entrances of the most excellent description. They are said to be the finest in the world. In these docks, vessels requiring up to 28-ft. of water can dock at all stages of the tide, and vessels exceeding that draft can dock for 20 out of 24 hours. There are direct sailings from Liverpool to practically every port of importance in the world. There is nothing, except excessive interest charges, to prevent the Mersey from being one of the most extensive trans-shipping ports in the world.

"The Port of Manchester may be described as an industrial port. The building of the Ship Canal was the work of a giant, and one is bound to admit that it stands without parallel in the country. Whilst it has not the depth of water comparable with that at Liverpool, it has other advantages of outstanding value, e.g., there are about fifty miles of canal frontage still to be developed, and adjoining are extensive tracts of land. These lands are measured in plots of hundreds of acres, and in some cases 500- to 1,000-acre sites are available for the establishment of extensive industries requiring waterside and railside communication. At present they may be assessed as agricultural hereditaments, although their close proximity to great seaports should place them in a higher classification, when compared with sites in the interior. The Trafford Park Estate was developed at one time with striking rapidity, but its progress in recent years appears to have been arrested. I fear this may be due to the increasing size of ship now employed on the big trade routes of the world, being in excess of the depth of water available in the Canal. The value of these industrial sites to a Port Authority is considerable, and if the industrialist had the advantage of four ports, instead of only one as at present, the prospects of those sites would be further improved and the industrial development of the district advanced at least one stage further in our time.

"The growth of industries in the South has become very noticeable in recent years, and the extraordinary rapidity with which Slough has been converted from a countryside to a town of factories, representing over a hundred different industries, is striking; coupled with that, you have the gigantic growth of the Ford Works at Dagenham and other concerns near the Thames. It is, therefore, essential that we in the North should get together and be prepared to attract industries to the Merseyside, where all public services are available.

"The Port of Garston is an efficiently equipped, railway-owned port, and although situated within the City of Liverpool, it is not within the Port of Liverpool. This anomoly requires to be removed, so that it may have the status to which it is entitled. Like other railway-owned ports, it has certain limitations, and one is that the shipments mainly arrive and depart by rail, and even the shipments for the City of Liverpool require to be sent by rail from one railway station in Liverpool to another within its own boundary.

"The Port of Bromborough is a privately owned port. The most extensive manufacturing concern in the world has built its own dock for the more economic handling of its own raw materials from overseas—truly another epoch-making event for the Mersey. And here again is a "Tied House" of an even more limited character than Garston.

"Under the Act of Parliament, the activities of this new, fully equipped port are restricted to the shipments to one customer only. This paralysing limitation was obviously imposed to protect the interests of the Mersey Docks and Harbour Board and/or the Ship Canal. In actual practice it means this: the products passing through Bromborough Docks will have to bear a higher transport charge for port facilities than would be justified under ordinary circumstances. Worse still, if new industries are erected on land forming part of or adjoining the Bromborough Port Estate, those industries are to be deprived of port facilities, although the most modern dock on the Mersey is situated next door to it. In other words, the community in which this dock is situated shall not have the use of it, by order of the Mersey Docks and Harbour Board, and the Ship Canal Company. Apart from administrative fear, such a handicap is detrimental to the industrial development of the Merseyside as a whole and to the rateable value of land within the local authority.

Finances of Dock Authorities.

"In the accounts of the Port of Liverpool it will be observed that the whole of its capital is raised by borrowing money, as distinct from invested capital, as and when required, at rates of interest prevailing in the money market at the time of issue. Originally, the repayment was based on a period of sixty years. Since then the period of redemption has been extended from time to time. The amount set aside each year has not kept pace with the amount required, and consequently borrowed for the working of the undertaking.

"For example, when the Estate passed from the Liverpool Corporation in 1857, the outstanding loan at that time was £6,000,000, and this was to be redeemed at the rate of £100,000 per year. Since then the loans have been increased to the neighbourhood of £36,000,000 or more, and the 'set aside' has not been increased proportionately. It still remains at the original figure of £100,000 per annum, whilst the borrowed capital has been increased six times over.

"There is a standing rule of the House of Commons that sixty years shall be the period of any loan. When an extension to that period is required, the sanction of Parliament should be obtained.

"In Manchester you have a statutory Board, similar to a railway company, and it is financed mainly on invested capital, with a certain amount of stock held by the Manchester Corporation. They, too, have since found it necessary to obtain the consent of their shareholders to mortgage the undertaking in order to provide additional capital.

"The Garston Dock is financed by the L.M. and S. Railway and the Bromborough Dock is part of the undertaking financed by Lever Brothers, Ltd.

"It would be an interesting subject to examine the finances of these undertakings. It would repay the closest examination and many interesting comparisons could be made. I would, however, prefer that the financial aspect of the United Ports be placed in the hands of those with exceptional training and experience in this particular class of accountancy and economic subjects.

"The accounts of both Liverpool and Manchester are published annually, and they are well known to the investing public. I see no serious difficulty at a later date in a financial expert formulating one consolidated statement representing the finances of the four ocean ports.

"One thing is certain—all four port Boards will find it increasingly difficult in the future to find sufficient money at low rates of interest to meet their steadily increasing requirements. They are each faced with stern realities on the financial side. In my opinion, such difficulties would be lessened by consolidation, and they would be increased by further competition, either in the form of rates reduction or in excessive building, on borrowed capital, for which interest must be paid, whether it is earned or not.

The Grouping of Mersey Ports—continued

Port Labour Conditions.

"In Liverpool nearly all the labour services are performed by private enterprises, under the licence of the Docks Board. There are approximately 60 to 70 master porters and stevedoring establishments engaged actively on the Docks Board in the Port of Liverpool. The labour performed by the Docks Board is confined to cargoes for their storage warehouses situated on and near the estate.

"The Manchester Ship Canal Company differs from other port authorities in that it has statutory monopoly in its labour, and this important principle would require to be very carefully examined with the principle prevailing in Liverpool and elsewhere.

"The Port of Garston is mainly concerned with rail-borne mineral and timber shipments, and is dealt with by the staff of the railway.

"In Bromborough there is a most complete form of 'Home Rule,' i.e., harbour, ships and cargo, belonging to the one interest.

Big Capital Expenditure Schemes.

"May we examine recent schemes and expenditure and decide which of them, in our judgment, were really necessary?

"For the purpose of discussion, I am going to submit that the building of the Gladstone Dock was necessary, and that it was undertaken at a time when it could be justified even more clearly than to-day. It presented a valuable addition to the port by extending its entrances into the Irish Sea, and thus giving a deep water entrance to the dock system of Liverpool at almost all the stages of the tide, with inter-communication to the adjoining docks. It represented a new era in dock facilities.

"The next scheme is the East Lancashire Road, which cost £3,000,000. Although not part of the Dock Estate, it was embarked upon mainly to connect the great Gladstone Dock with the interior by road. In other words, to bring the industrial areas of Lancashire and Yorkshire within easier access to the Liverpool Docks. On this scheme the voice of Manchester was emphatically against it—the railways were also against it. The opposition of both was mainly for one reason, and that was the £3,000,000 expenditure merely provided an alternative route by road to towns already adequately served either by canal or railway. It is very doubtful if the scheme would ever have been undertaken if the ports of Liverpool and Manchester had been under one central control.

"Next in line may be taken the Stanlow Wharf at Ellesmere Port. This expenditure at the Mersey end of the Ship Canal provided a depth of water and a duplication of installation to that already provided by the Mersey Docks and Harbour Board for the oil trade on the other side of the river at the Dingle. Again, it is questionable if the expenditure incurred here has not added enormously to the cost of port facilities for the oil trade without sufficient increase in receipts to justify a competitive establishment so close to the one on the riverside at the South Docks.

"The newest addition to the Dock Estate in the Port of Liverpool is situated at Bidston Moss, and one thing is certain—that it will be very many years before it is required. Just as the Docks Board and the Ship Canal Company joined in opposing the promotion of Bromborough Dock, so Lever Brothers and the Ship Canal could join in opposing the construction of this dock. It is intended to provide dock facilities for the North Wirral, because of the anticipated industrial development of lands adjoining, and with that object we will join in the earnest hope of its early employment.

"The rapidity with which capital expenditure has been undertaken will convey an idea as to the intensity of the competition which prevails in the Mersey.

"During the past thirty years Liverpool, Manchester and Garston have competed like tigers in open conflict, under the old slogan, 'Secure the business.' In that contest millions of capital has been expended, and it would not be unreasonable to state that a substantial portion of this capital which was cast upon the waters may not return in the form of increased traffic receipts; therefore, why not let us think afresh—cease this futile and useless competition in the duplication of interests. Let the present resources of each be specially considered and utilised in the most intelligent way, to the greatest development of both industry and shipping. I doubt very much indeed if competitively little more, if anything, can be gained by any one of these ports using the one river.

Port of London Authority.

"The most stubborn opponent to the principle of grouping would admit that wasteful competition was eliminated by the formation of the Port of London Authority. He would also agree that similar overlapping is cut out by the association of the ports in South Wales. Further, and even more important, he would agree that increased efficiency was established in both the Port of London and in South Wales.

"I will ask you to give us the benefit of your opinion on the policy of borrowing money to spend in building duplicate establishments year after year, heaping up debts which will never, never be repaid. The interest charges alone are steadily and surely placing millstones round the necks of every user of these ports from now until Eternity.

"It is an easy matter to criticise politicians on spending public funds, but much more serious responsibility rests upon the selected members of port authorities for their reckless expenditure.

Leading Questions.

"May I now submit five leading points for your consideration, viz.:—

"1. Would the future of these four ports representing liner, industrial, railway and private interests be better secured by grouping all under one central authority?

"2. Would the future development of these docks and industrial estates be more definitely assured?

"3. Would further capital expenditure on a big scale be curtailed?

"4. Would the future of the whole be improved by association with the railways serving the district, and thus obtain for the ports the advantage of a railway terminal company?

"5. Would the combined capital involved constitute a better and sounder security under one authority?

"I am prepared to take my stand for the affirmative in each instance and to make the suggestion that the formation of the Liverpool and Manchester Harbour Board would render a more useful service than the present competitive and duplicated establishments."

Trafford Park Critic.

In the discussion which followed Mr. W. H. Hamilton (Trafford Park Estates, Manchester) described Mr. Hall's paper as a broadminded effort, but he had not gone far enough. His view, however, was rather parochial. All his remarks referred to the wasteful expenditure as between Liverpool and Manchester and Bromborough and Garston, when what was wanted was a combination of all the ports in the country to eliminate wasteful competition. Liverpool and Manchester, for instance, suffered from the competition of London. Millions of pounds' worth of goods were coming to the North of England via London—entailing a great deal of waste of the nation's resources in transport. He thought there should be one authority to govern the whole of the ports of the country, and that goods should be despatched by the cheapest and quickest port. It would be interesting to learn how Mr. Hall proposed to persuade the L.M.S. to give up Garston. He could hardly conceive them to be willing to agree to that, any more than some traders would, as it was stated that the dock was being worked under cost. He understood that the railway company was using the Port of Garston as a subsidy service, in order to attract traffic to the railway.

Mr. M. A. Robinson commented that theoretically the idea of the four Mersey ports being grouped under one administrative authority was quite nice, and the idea could be extended to embrace the nationalisation of the ports, but was it applicable when transport depended so largely on the human element? Could it be claimed that the interests of Liverpool and Manchester alone were ever likely to get fair and equitable administration on any joint board? Liverpool was the finest transshipment port in the world, but cost required to be watched very closely at the present time. Liverpool was hopelessly beaten on the question of trans-shipment costs by London and the Continental ports, which made more use of barges than we did.

Mr. R. J. Hall intervened to say that the grouping of ports was practicable, especially those on the Thames, the Severn, the Clyde and the Mersey. They might easily lead the way to a national scheme of grouping, when public opinion was ripe for that development.

Concerning the port of Garston, if the railway companies were a little more commercially minded it would not be difficult to ask them to part with something on which they had been losing money for 30 or 40 years. The time had come when ports could not afford to compete against each other, especially as all of them were heavily burdened with capital costs on which interest must be paid. He stressed the word "must." Economic pressure would certainly break down the barriers that divided ports situated contiguously. In his opinion it would be quite simple for Liverpool and Manchester, having commercial interests in common, to be administrated by a central authority and to preserve their separate interests.

Ribble Dock Chief's Comment.

Mr. J. G. Merriweather, general traffic manager and dock superintendent, Ribble Navigation, whilst admitting that sometimes amalgamations were for the good of all concerned, suggested that competition was sometimes best for the consumer.

The Grouping of Mersey Ports—continued

What brought about the Manchester Ship Canal? If that question were asked at Manchester no doubt the answer would be: "The Mersey Docks and Harbour Board and the Manchester desire to cheapen transport costs." Intensified competition seemed to benefit the community.

Mr. Hall said the value of competition had been overrated, and in these days, owing to considerations of capital expenditure, it could not be allowed to go uncontrolled. By subordinating inter-port rivalries and the creation of a Central Board, the utmost economic advantage could be obtained from the different port systems.

Liverpool's Liner Mind.

Mr. Bond said the Mersey Docks and Harbour Board had the liner mind—it seemed to work for the benefit of the great steamship owning companies and not for the small shipowner. At one time the South End Docks, Liverpool, were a hive of industry, but the liner mind of Liverpool conceived the Gladstone Dock System, which was now extensively used by the large ship-owning companies, some of whose ships had moved from Liverpool to London and Southampton.

Mr. Norman E. Box (Manchester) said Manchester people were sick and tired of the Mersey Docks and Harbour Board, whose facilities for the loading and unloading of heavy vehicles, particularly those carrying heavy machinery, left much to be desired. If one wanted a favour from the Manchester Ship Canal Company they would say "We shall try to oblige you." Go to the Mersey Docks and Harbour Board and they would say "Here are the regulations." The facilities at Manchester, he said, were much in advance of those at Liverpool. He was speaking now from the road transport point of view. In Liverpool they had to rush goods down to the docks on a Sunday because they could not start on a Saturday, and unfortunately one could not reason with the Dock Board.

Colonel Ainley, traffic superintendent of the Mersey Docks and Harbour Board, gave it as his opinion that this amalgamation would take place sooner than many people thought.

Winding up the discussion, Mr. R. J. Hall referred to the many big capital works that had been undertaken in recent years, and contended that many of these would have been unnecessary had the Mersey ports been grouped. Although some of the Liverpool Docks had now outlived their usefulness, they still had a commercial value, and that was a point that merited careful consideration. Manufacturers were steadily eliminating competition and were producing better and cheaper articles, yet were giving shareholders greater satisfaction than in the old days. Some of the charges in the Port of London were only about one-third of what they were on Merseyside. Surely the arguments for the grouping of ports deserved very close and serious consideration.

Aden Port Trust.

The returns of shipping using the port during the month of December, 1931, were as follows:—

	No.	Tonnage
Merchant Vessels over 200 tons ...	110	449,385
,, ,, under 200 tons ...	4	637
Government Vessels	15	18,332
Dhows	123	5,728
PERIM.		
Merchant Vessels over 200 tons ...	22	74,140

The total value of imports excluding Government stores was Rs.48,16,000, as compared with Rs.44,65,000 for December, 1930, and of exports Rs. 38,04,000, as compared with Rs.31,87,000.

The total value of both imports and exports together was Rs.86,20,000, as compared with Rs.76,52,000 for the corresponding month of 1930.

Imports during the month were above those for December, 1930, in the case of coffee, grain, pulse and flour, hides (raw), skins (raw), sugar, piece goods (white, printed or dyed),

TRADE OF THE PORT.

Article.	Unit.	Imports.		Exports.	
		Quantity.	Value Rs.	Quantity.	Value Rs.
Coal	Tons	0	0	0	0
Coffee	Cwts.	6,063	1,96,774	6,513	3,00,093
Grain, Pulse and Flour	,,	53,178	2,87,276	26,148	1,41,258
Gums and Resins	,,	5,805	76,166	4,379	84,257
Hardware	—	0	3,644	0	12,471
Hides, raw	No.	3,539	5,688	13,580	23,775
Oil, Fuel	Tons	26,115	7,92,450	0	0
,, Kerosene	Gls.	42,838	30,791	3,392	2,608
,, Petrol	,,	20,498	25,663	1,120	1,458
Salt	Tons	0	0	17,750	1,90,300
Seeds	Cwts.	3,582	32,322	960	10,333
Skins, raw	No.	283,658	1,79,379	371,100	3,27,588
Sugar	Cwts.	49,988	3,30,789	20,048	1,36,337
Textiles—					
Piece Goods, Grey	Yds.	4,317,200	6,69,241	4,978,560	8,03,450
,, ,, White	,,	786,914	1,57,643	240,539	56,382
,, ,, Printed or Dyed ...	,,	814,094	1,89,785	1,094,472	2,92,574
Twist and Yarn	Lbs.	263,650	1,30,692	182,514	87,993
Tobacco, Unmanufactured	,,	1,265,124	2,29,342	604,548	1,19,893
,, Manufactured	,,	43,764	49,122	25,900	21,250
Other Articles	No. of Pkges.	72,781	10,52,081	35,729	5,00,601
Treasure, Private	—	0	3,76,917	0	6,92,015
Total ...	—	—	48,15,765	—	38,84,636

The number of merchant vessels over 200 tons that used the port in December, 1931, was 110, as compared with 125 in the corresponding month of 1930, and the total tonnage was 449,000, as compared with 506,000.

Excluding coal, salt, fuel oil and military and naval stores and transhipment cargo, the total tonnage of imports in the month was 12,400, and of exports 6,400, as compared wtih 9,300 and 5,500 respectively for the corresponding month of 1930.

tobacco (unmanufactured) and treasure (private); and below in the case of gums and resins, hardware, seeds, piece goods (grey), twist and yarn, and tobacco (manufactured).

Exports were above those for December, 1930, in the case of coffee, grain, pulse and flour, hides (raw), sugar, piece goods (grey, white and printed or dyed), tobacco (unmanufactured) and treasure (private); and below in the case of gums and resins, hardware, seeds, skins (raw), twist and yarn, and tobacco (manufactured).

North-East Coast Notes.

Middlesbrough Dock. The L. & N. E. Rly. Co.

Meeting of the Tyne Commission.

THE most satisfactory figures in the reports submitted to the Tyne Commission at the meeting in March were those referring to bunkers, for the shipments in January and February were rather better, the total being 358,660 tons against 301,848 tons in the corresponding month last year, an increase of 56,812 tons. In February the loadings of coal and coke amounted to 1,093,614 tons compared with 1,120,741 tons in the corresponding month of last year, a decrease of 27,127 tons. In the two months of this year the shipments were 2,260,367 tons, or 238,918 tons less than in the first two months of last year.

Mr. H. P. Everett, who presided at the meeting, made an important statement with regard to the operation of the Mines Act of 1930. He said that on March 4th he had an interview with the President of the Board of Trade concerning the heavy drop in the Tyne shipments. He emphasised the serious position of the Tyne, and more especially since the passing of the Coal Mines Act. Since then, he said, the coal and coke shipments had gone down regularly and very considerably. The President of the Board of Trade made no promises, but said what had been put before him would be treated sympathetically. Mr. Everett added that if inland prices were stabilised it might be possible to allow export prices to find their economic level and to remove the restrictions with regard to minimum prices and quota. It looked like a subsidy to the export trade, but from time immemorial the collieries had got their home prices and had to take lower prices for export fuel.

Review of the Tyne Position.

At the latter part of February Mr. Francis Priestman, Chairman of the Finance Committee, gave his annual statement as to the financial position of the Tyne Improvement Commission. He said that he regretted to have to record a volume of trade both in the export of coal and in the import and export of general merchandise, which reflected the depressed state of industry. In volume of coal export they experienced in 1931 the worst year for more than three decades. It was necessary to go back to the year 1897 to find a parallel. In regard to the volume of general merchandise they must go back to 1922 for a parallel. One aspect of the reduction in trade, and the one which was one of the chief concerns of the Commission, was the reduction in the Commissioners' revenue. Compared with 1930, it meant a fall of £80,000, and 1930 was not a year that could be looked upon with satisfaction. Notwithstanding that drop, there were features in the report that he thought would give gratification to the members. A reduction in revenue of £80,000 was no inconsiderable sum, but they had met their interest obligation of £153,000. They had met their statutory obligation for the redemption of debt of £81,000; they had charged against the revenue of the year a sum of £25,000 for replacement of plant; they had made the requisite provision (£16,000) for income tax on their financial figures for 1931, and yet the deficit was only £41,000. Those were figures that he hoped would produce a measure of satisfaction, small though it might be. Turning to the volume of coal export, Mr. Priestman said: The year commenced in difficulties, and in difficulties it continued and closed. I say unhesitatingly that the ill-advised Coal Mines Act of 1930 must bear a large share of the responsibility for the small volume of coal export from the Tyne in 1931. Accustomed as we were in pre-war days to an annual volume of 18 to 20 million tons, it is most unsatisfactory that less than 14 millions should be the share of the Tyne's trade in 1931, and yet it is so. Fixation of prices with restricted output have, in my view, done incalculable harm to the export trade. In looking at the decrease of coal and coke shipments from the port of 19 per cent. compared with 1930, it would be well to realise that 19 per cent. represented $3\frac{1}{4}$ million tons, and that of that figure three millions were foreign exports, the balance being a reduced home consumption. The significance of those figures needed no comment—they were self-evident.

About Dock Dues.

The London and North-Eastern Railway Co. is making an effort to restore the bunker trade at Tyne Dock by reducing the dues there. The company has put into operation there the following reduced scale of dock charges on vessels that do not load or discharge cargo, but call for bunkers only: If proceeding to a port to which a dock due of 2d. per net registered ton applies, $\frac{1}{2}$d. per net register ton; if proceeding to a port to which a dock due of 4d. or 6d. per net registered ton applies, $1\frac{3}{4}$d. per net registered ton.

South Shields has been endeavouring to secure the removal of town dues on coal shipments from the Tyne, which it is contended results in the diversion of trade from the Tyne to the Wear, and as a result of their efforts a letter was received from the Mines Department Committee of Investigation for the Durham District by South Shields Town Council. The letter stated that the Committee, having investigated the complaints of the Mayor and others, has decided to report, under Section 5 (6) of the Coal Mines Act of 1930, to the Board of Trade that the provisions of the Durham District coal mines scheme ought to be amended on the grounds that they are inequitable in their operation.

North-East Coast Notes—continued

Blyth Commission.

At the annual meeting of Blyth Harbour Commission, Mr. Ridley Warham was re-elected chairman and Mr. R. M. Sutton was re-elected deputy chairman. The following were elected to serve on the Blyth Pilotage Authority: Messrs. R. M. Sutton, H. S. Helme, E. R. Newbegin and A. Walton. It was agreed to improve the fog-signalling arrangements at the harbour entrance by the provision of a diaphone fog-signalling apparatus. An application by the Cowpen Coal Co., Ltd., for facilities to erect a shipping point by means of belt conveyors in the upper harbour also was approved. The Chairman of the Finance Committee (Mr. T. E. Forster) presented the accounts and balance-sheet, which showed that the Commissioners' finances were in a satisfactory position, and after meeting all expenses there was still a margin out of revenue to meet items of expenditure of a special character. It was reported that a good illustration of the advantages of the Saturday working occurred when a ship arrived at 9.20 a.m., commenced loading at 10 a.m., and sailed at 8.30 p.m., having taken 4,103 tons.

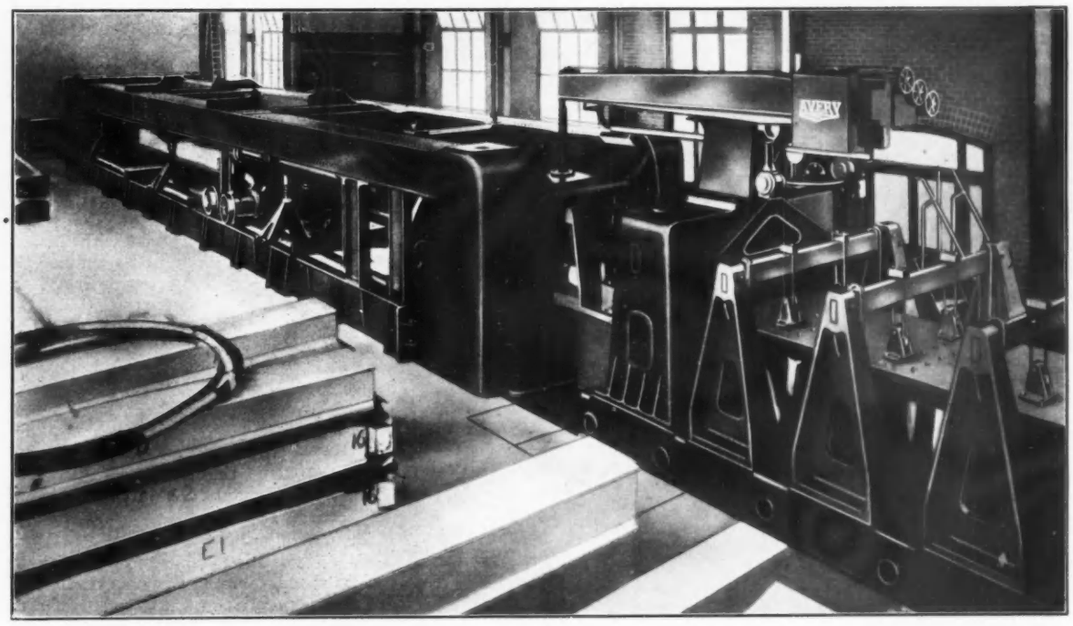
Wear Appointment.

Captain W. E. Chapman, of Sunderland, has been appointed by the Wear Commission to the post of Superintendent Harbour and Dock Master. Capt. Chapman, who is a Sunderland man, had been at sea since 1900, and for the past 16 years had held command of steamers. He traded chiefly between Sunderland and London and near Continental ports, and has thus had large experience in handling ships in and out of the port and the South Docks.

Exports from the Wear.

The coal and coke shipments from the Wear are being well maintained. The official figures for January showed a total of 456,562 tons compared with 442,240 tons in 1931. Other exports, however, were small, being 2,562 tons compared with 8,311 tons for January, 1931.

The World's Largest Compound Lever Testing Machine



DR. BRADFIELD, the Chief Engineer of the New South Wales Government, in drawing up his specification of the new Sydney Harbour Bridge, made provision for the construction of a testing machine of such power and internal accommodation that large-sized models of the more important built-up members of the bridge could be tested by direct experiment.

In doing this the engineer had in mind the elimination of all possibility of error due to any miscalculations in the preparation of the designs and an added assurance that the undertaking would be rendered free from mishap either during its erection or throughout its ultimate service.

Messrs. W. & T. Avery, Ltd., Soho Foundry, Birmingham, designed and constructed for the contractors a testing machine of 1,250 tons capacity—the largest compound lever testing machine in the world of its kind. Models of all important units of the Sydney Bridge were made to a scale of $\frac{1}{6}$th to $\frac{1}{4}$th, dependent on the actual size, and these were individually tested in this machine. By this means the preliminary calculations were definitely verified in a practical manner, and local failures, especially of the rivetted connections, were rendered almost impossible.

As a direct result of this, the building of the bridge went forward without complications of any kind.

In addition, the Avery Testing Machine afforded much useful information regarding the design of some of the temporary erecting gear, especially in regard to the huge anchorage required to hold the unsupported sections of the arch as they were being erected.

As in all testing machines, the 1,250 tons machine comprises two separate systems, one for the application of the load to the specimen and the other for recording the capacity of the load applied. In the 1,250 tons machine the load is applied by a hydraulic cylinder at the right end of the machine, while the load indications are registered by the weighing system at the opposite end. As weighing machine experts will appreciate, the part which required the greatest amount of thought in scheming out of the whole of the apparatus was the weighing system. To receive a load of 1,250 tons upon knife-edges was something which had not been done previously.

Finally, four levers were arranged in parallel, each having a load knife-edge 60 inches in length, the only problem now presenting itself being that of securing even distribution of the total load over each lever. This was obtained by forcing each knife-edge into hard contact with its respective bearing and then adjusting the knife-edges and bearings at the outer extremities of the lever to suit.

The indication is that the future of testing apparatus will probably lie more in the direction of testing the complete unit of a structure, instead of testing only the material, which leaves to chance the possibility of error on the part of the constructor or designer.

A Few Facts about the Largest Universal Testing Machine in the World.

Made by W. & T. Avery, Ltd., Soho Foundry, Birmingham. Loading capacity: 1,250 tons. Overall length: 120-ft. Weighing system: 4 levers working in parallel, each lever equipped with load and fulcrum knife-edges of hardened steel. Steelyard: Reading from zero to 1,250 tons by 1-ton divisions. Straining apparatus: Cast steel hydraulic cylinder and ram, maximum pressure 2 tons per sq. in. Ram: 32-in. diameter, 5-ft. 6-in. stroke.

The machine will take and test to destruction a built-up compression member 50-ft. long with a cross-section 45-in. sq.

Testing in tension—wire rope and chains: Round bars up to 6-in. diameter, 50-ft. long; flat specimens up to 12-in. wide, 3-in. thick, 50-ft. long. Transverse test: 42-in. wide, span of 20-ft; depth can be extended to 50-ft.

Hull and the Humber

The L. & N. E. Rly. Co.'s Victoria Dock, Hull. A general view of the Storage Grounds.

Improvement at the Confluence of the Trent and Ouse.

THE improvement at the confluence of the Trent and the Ouse, where they form the Humber, is proceeding apace, and when completed will do much to increase the scour and improve the navigable channel in the upper reaches of the river. At the last meeting of the Humber Conservany Commissioners it was reported by the engineer (Mr. A. E. Butterfield) that during the year both Ouse and Trent training walls had been carried forward 375-ft., leaving approximately 600 yds. of the former and 1,300 yds. of the latter to complete. The engineer certified that the Aire and Calder Navigation were entitled to the payment of £20,357, being the amount of the costs, charges and expenses incurred by them during 1931 in connection with the construction of the training walls. The payment was duly authorised, making a total to date of £53,066.

Pilotage Rates on the Humber.

With regard to the requests for a reduction in pilotage rates on the Humber, it was agreed that the shipowners' representatives and the pilots' representatives should meet " to talk matters over."

Question of a "Free Port" at Hull.

It is not yet certain whether a " free port " for the conduct of the transhipment or re-export trade will be provided at the Hull Docks or whether alternative facilities will be provided by H.M. Customs. The re-exports of foreign and Colonial merchandise at Hull are equal to only about 2 per cent. of the gross imports, which is a very small proportion and would hardly seem to justify the setting apart of a dock on the lines of the free ports on the Continent for the purpose. A further difficulty is that Hull is a tidal port and delays would be inevitable had a vessel to enter the free port before proceeding to the particular dock where she might be berthed to discharge the bulk of her cargo. Another question which arises is as to whether Hull Docks could afford the space for the exclusive accommodation of the re-export trade in view of the fact that the present dock accommodation is not adequate for the present day requirements of shipping visiting the port, and apparently is not likely to be increased for some years. Hull shipping and commercial interests have been pressing the London and North-Eastern Railway to complete the King George Dock by the construction of an additional " arms " provided for in the original plan, but the directors have intimated their inability to proceed with the work for financial reasons. More facilities for the grain trade are also demanded, but must wait for a similar reason.

Decreased Coal Export Trade at Hull.

The coaling appliances at Hull and the sister ports of the Humber have been working much below normal owing to the decreased export trade. The exports of coal from the Humber to places abroad to March 1st were 614,041 tons, and from Boston and Lynn 49,549 tons, as compared with 788,189 tons in the corresponding period of last year, the combined decrease being 124,599 tons. Hull's contribution to the total was but 166,455 tons, while that of Immingham was 259,916 tons and that of Goole 156,956 tons. Shipments of coal coastwise and as ships' bunkers have, however, been at about the same level as a year ago. Imports of wheat and kindred cereals, oil seeds, etc., at Hull were approximately 40,000 tons behind down to the first week in March, and imports of timber were also less at the same date. In the closing days of February there were scenes of great activity when extra large quantities of general merchandise were handled at all the ports in anticipation of the import duty, which began to operate on March 1st.

Aire and Calder Navigation Statistics for 1931.

The Aire and Calder Navigation, whose system radiates from Goole, suffered a decrease in volume of transport, though fortunately the accounts have admitted of the payment of a dividend of 5 per cent. for the past year. At the annual meeting the chairman (Lord Deramore) stated that the coal carried in the compartment boats of the Navigation showed a decrease of 120,097 tons, the total tonnage of coal and coke shipped at Goole showing a decline of 286,596 tons. On the other hand, there was an increase of 2,165 tons in the merchandise carried. The general trade showed a decrease of 71,454 tons, although there was an increase in petrol and fuel oil, the total of which was no less than 35,962,200 gallons. The aggregate of all traffic conveyed over the waterways during 1931 was 2,206,392 tons, a decrease of 187,573 tons as compared with 1930. The number of sea-going vessels using Goole Docks was 29 fewer than in the preceding year. Lord Deramore also stated that it would be necessary to continue apposition to the proposed Humber Bridge if it came before the House of Lords, as expected after Easter.

Revenue of the Trent Navigation during 1931.

The ordinary revenue of the Trent Navigation in 1931 amounted to £98,240, compared with £85,349 in 1930, while the expenditure at £81,674 compared with £77,564. The balance of receipts over expenditure was £16,566 against £7,785. Traffic revenue alone amounted to £79,842, an increase of £6,314, and the expenditure £72,747, including £3,661 paid in tolls to the Nottingham Corporation. The total weight of traffic carried was 143,023 tons, an increase of 5,375 tons. In view of the fall in values, the directors considered it desirable to have a re-valuation of the company's fleet. As a result, the annual report states, it was found necessary, in addition to the usual provision for depreciation charged to the revenue account, to write down the value of the vessels by a further £3,000. The fleet now stands at a figure which the directors consider represents current market value. Capital account has been debited with £3,200, the cost of land and premises acquired by the company at Shardlow and elsewhere.

Notes from the North

Liverpool's Busy Docks.

One of the busiest periods for years was experienced at Liverpool Docks immediately prior to March 1st. Berthage was provided for nearly 40 vessels. Most of the vessels engaged in the race against time were carrying general cargo subject to import duties. Ships had to reach Liverpool before 4 o'clock on February 29th in order that the cargoes might not have to pay the new duties.

Otterspool River Wall.

Liverpool Corporation has obtained sanction to borrow £17,942 for additional expenditure required to complete the construction of the River Wall and Embankment, Otterspool.

Dock Warehouses Destroyed.

Heavy damage, estimated at £50,000, was caused by the fire which destroyed the Birkenhead Dock headquarters of the Blue Funnel Line (Messrs. Alfred Holt). It started in one of the Cathcart Street warehouses and offices of the company at the Great Float, gutting a 300-ft. block of buildings belonging to the Mersey Docks and Harbour Board. Valuable electrical equipment, warehouse material, model ships, palatial offices and stores were consumed in the raging furnace fanned by an easterly gale. The fire is believed to have originated in the boiler house, which is situated in the centre of the buildings. Within two hours of the commencement of the blaze the roof of the warehouse crashed in with a roar, and the second and first floors followed in rapid succession. Some alarm was caused when sparks caused the roof of an adjoining warehouse to smoulder, but the firemen on roof guard detected the outbreak, which was quickly smothered. The buildings, which belong to the Mersey Docks and Harbour Board, were among the first to be erected when the docks were built, nearly 100 years ago.

Liverpool's Dock Railway.

Liverpool's dock railway, the Overhead, has experienced a decline in traffic and receipts on the past year's working. At the annual meeting of the company Mr. M. H. Maxwell, chairman, reported there was a deficiency in the net receipts of £6,056 as compared with a surplus of £1,846 the previous year. The number of passengers carried was only 6,345,111, against 6,824,374 in 1930, the lowest number previously being 6,502,816 in 1894, the first full year of the company's working. The company is dependent upon work along the line of docks, and owing to the demand for labour having fallen in a marked degree, has suffered accordingly. There was a deficiency on the year's working, after charging debenture interest and allocating £400 to the contingency fund, of £6,238, which absorbed all but £934 of the carry-forward. The value per passenger had fallen from 2.43d. in 1930 to 2.27d. in 1931, representing about £4,000. Total expenditure, including transfers to renewal fund, amounted to £75,556, as against £77,824 in 1930.

New Jetties.

A barge berth with reinforced concrete jetties has been constructed at the new provender mill of Messrs. R. and W. Paul, Ltd., at the Manchester docks, and road access to the mill has been provided.

Birkenhead Rolling Bridges.

One of the three rolling bridges over the Seacombe-Birkenhead Docks route is nearly finished. This type of bridge will expedite the passage of ships from one dock to another, but the question is often asked: Is it not possible to increase the speed of some of the barges which cause considerable delay to vehicular traffic? The cumulative effect of this delay is serious.

Caernarvon Harbour Trust.

Taking advantage of the high spring tide and fine weather, the Caernarvon Harbour Trust has cleared the accumulation of mud at the entrance of the north-east part of the dock and the old harbour, by Messrs. Morris and Jones's premises. Receipts and expenditure during February were: Balance at bank beginning of month, £603 17s. 4d. Receipts: Harbour dues, £82 6s. 7d.; wharf, yard and office rent, £42 14s. 11d.; water rent, £1 17s.; quit rents, £1 14s.; towage, 13s. 6d.; total receipts for the month, £134 16s. 6d. Total expenditure for the month was £391 12s. 11d.

Manchester Ship Canal Year.

Speaking at the annual meeting of the Manchester Ship Canal Co., Mr. Alfred Watkin, the chairman of the directors, said gross receipts for the year showed a decrease of £119,457, with a decrease in tonnage of sea-borne traffic of 406,524 tons as compared with the previous year. There was some satisfaction in the fact that the second half of the year only added to that decrease by £28,534, and in the months of October and November there was an actual improvement compared with the corresponding months of 1930. In view of the shrinkage in the trade of the country as a whole, it was a matter for congratulation that the trade of the port had been relatively so well maintained. It was particularly gratifying to note that the imports of raw cotton to Manchester were rather greater in the last year than in the preceding one. The net saving in expenditure in respect of the Ship Canal amounted to £52,735. Reductions were effected in every department. Some of these savings were only made possible by the decreased volume of traffic. The net receipts of the whole undertaking, Ship Canal and Bridgewater departments and miscellaneous receipts, amounted to £758,117, as compared with £810,313 in the previous year. Deducting therefrom chief rents, rent of grain elevators, rent of No. 9 Dock, and transit sheds and warehouses, there remained an amount of £643,244, as compared with £701,676 in the previous year, a decrease of £58,432. The working of dock railways showed an improvement of £13,136 as compared with the year of 1930, which brings the surplus back to practically the same amount as that for the year 1929. The total net revenue of the Bridgewater Department from all sources, including the working of Bridgewater railways, rents and miscellaneous receipts included in the accounts under their appropriate headings, amounted to £5,672, as compared with £8,636 in the preceding year, a decrease of £2,964.

Referring to new constructional work, Mr. Watkin said there were two schemes which it was absolutely necessary to carry out. One was the new oil dock at Stanlow, which was situated 4½ miles from the entrance to the Canal, and the other a wharf and lay-by at Irlam. Good progress had been made with the construction of the oil dock. The estimated cost was £240,000, but, being anxious to conserve capital resources in view of the present state of trade, the company had since modified the scheme and thereby reduced the immediate expenditure from £240,000 to £200,000, which it was believed would meet the requirements for some years to come. If, however, petrol traffic increased very substantially, it would be necessary at some future time to incur further expenditure. The construction of the second dock was necessary because in the present dock there is only accommodation to berth one large ship at a time, and in the past they had frequently had ships waiting for berths. Naturally, these delays could not be allowed to continue without prejudice to the port. The other constructional work mentioned was the provision of a wharf and lay-by at Irlam in connection with the modernisation and extension of the iron and steel works of the Lancashire Steel Corporation at that place. In both cases they had obtained financial assistance in respect of these works from Government grants, and were satisfied they would get an adequate return upon the money expended. It was now necessary to raise on mortgage further capital, not exceeding in the aggregate the sum of £350,000, because there was a debit balance of £81,500 on capital account, and the estimate of further expenditure, chiefly to complete the works already mentioned, was £205,914, making a total of £287,414.

Manchester Ship Canal Traffic.

Here is a summary of the statistical returns of the Manchester Ship Canal Company for comparable periods:—

	1926	1930	1931
	£	£	£
Total Expenditure on Capital Account	19,194,239	19,975,522	20,056,811
Gross Receipts	2,211,281	1,905,195	1,763,483
Expenditure	1,269,940	1,144,554	1,042,332
Net Receipts	941,341	760,641	721,151
Interest on Loans and Debenture Stocks, etc.	354,932	421,885	454,975
Balance after payment of Preference Dividends	265,984	82,652	71,128
Dividend on Ordinary Stock ...	187,565	75,028	37,514
Rate per cent.	5%	2%	1%
Surplus	78,419	7,624	33,614
Appropriation to Reserve	80,000	7,000	30,000
Carried forward	31,436	28,190	31,804

The following is a statement of the toll-paying merchandise traffic and the receipts of the port during which the Ship Canal has been open for traffic:—

Year	Sea-borne Traffic	Barge Traffic	Total	Ship Canal Tolls, Ship Dues, and Miscellaneous Receipts
	Tons	Tons	Tons	£
1894	686,158	239,501	925,659	97,901
1896	1,509,658	316,579	1,826,237	182,330
1900	2,784,843	275,673	3,060,516	290,830
1905	3,993,110	260,244	4,253,354	449,436
1910	4,618,070	319,561	4,937,631	555,735
1915	5,115,954	318,092	5,434,046	757,268
1920	4,099,326	288,037	4,387,363	1,461,909
1925	5,622,405	259,286	5,881,691	1,493,544
1926	6,533,780	297,099	6,830,879	1,592,219
1927	6,099,636	259,784	6,359,420	1,576,237
1928	6,021,316	235,579	6,256,895	1,517,018
1929	6,344,005	214,584	6,558,589	1,528,784
1930	6,094,719	195,906	6,290,625	1,395,567
1931	5,688,195	210,094	5,898,289	1,276,110

Notes from the North—continued

Profitable Traffic.

Imports of sugar into Liverpool last year amounted to 661,835 tons, and 12½ per cent. of the total revenue of the Mersey Docks and Harbour Board was from sugar. Raw cane sugar came to Liverpool from every quarter of the globe. The only trade of more importance is the corn trade.

Quick Cargo Discharge.

Information comes to hand of another instance of quick cargo discharge at Liverpool Docks. The steamer "Richard de Larrinaga" arrived from the River Plate with a cargo of 7,862 tons of wheat in bulk, including 3,287 tons in bags, and completed the discharge of the cargo in 22 hours. The output averaged 357 tons per hour, which was 155 tons greater than the last reported output.

Graving Docks should be Shipbuilding Yards.

A special committee of the Mersey Docks and Harbour Board has interviewed the Collector of Customs, representatives of the Steam Ship Owners' Association, and various local commercial associations, with reference to the changes brought about by the introduction of tariffs. The Committee states that whilst it is essential that, in the event of the Government deciding, either now or in the future, to establish free port areas at certain of the ports in the United Kingdom, Liverpool should be included in the list of such ports; the establishment of free port areas does not appear to be necessary at present. Arrangements should be made, reports the Committee, for the graving docks of the Board to be registered as shipbuilding yards, in order that the ship-repairing firms using the Board's graving docks (including shipowners who have their own ship-repairing works) may be placed in the same position as shipbuilding or ship-repairing firms who carry out the work of shipbuilding or ship-repairing in their own graving docks. The Committee is making enquiries as to what steps are necessary for this purpose, and when these are completed will report further. The Government should be responsible for the expense incurred in providing the additional accommodation at the docks, both inside and outside the dock sheds, which may be necessary in consequence of the increase in the Customs staff required to cope with the additional work involved by the imposition of the duties. In view of the fact that attendance of Customs officers at the docks would be required to a much greater extent than hitherto, the Government Departments should be approached with a view to port authorities and shipowners and others using the docks being relieved of the obligation to pay any overtime charges for the attendance of Customs officers during ordinary working hours.

Mr. R. D. Holt, chairman of the Board, states it is quite possible the Board might have to increase slightly the amount of bonded warehouse accommodation in the port. The liability to provide the huts and accommodation the Customs required was imposed upon the Board by the Act of 1858, when the fashion was to take Customs duties off instead of putting them on. Clearly it was not then contemplated that accommodation would be required on the present scale. When petrol was made dutiable they had to find £370 to provide Customs accommodation at the Dingle jetty. The cost of Customs accommodation fell upon the whole trade of the port and put them at a disadvantage as compared with foreign or competitive ports. It was quite reasonable to ask that the new expenses should be borne by the Exchequer.

Question of Landing Charges and Master Porterage.

A point of interest in connection with the collection of the new *ad valorem* import duties has arisen at Liverpool, where a special meeting of representatives of commercial associations has been held to consider the matter. H.M. Customs has ruled that the value of the import duty should be the c.i.f. plus landing charges and master porterage. As master porterage charges are bound to vary throughout the United Kingdom, the commercial interests of the port are striving to get the c.i.f. value as a basis on which the duty should be paid. "It appears to me," states Major J. A. Eckes, "that we should have a flat rate throughout the whole United Kingdom. I understand this works already in London, and we should try first of all to get the c.i.f. value as the value according to the Bill. If we can, we should see that the same landing charges are added to the c.i.f. value in every port in the United Kingdom, irrespective of what those charges actually are. Clause 15 of the Imports Duties Act states: 'Delivered at the port of importation, freight, insurance, commission, and all other costs, charges, and expenses incidental to the purchase and delivery at that port, excepting any duties to Customs having been paid.'"

The meeting unanimously passed the following resolutions: (1) That for the purpose of agreeing on the meaning of the words "Delivery at the port," in Section 15, these words shall mean delivery at the ship's rail. (2) That if duty is to be paid upon any charges after delivery at ship's rail that shall be a uniform rate for all ports in the United Kingdom and Northern Ireland.

Personal.

Mr. Herbert Charles Hatton, a member of the Mersey Docks and Harbour Board consulting staff, and an ex-member of the Hoylake and West Kirby Urban District Council, died recently. In 1912 he occupied the chair of the Hoylake Council for two months, but, acting on the advice of the Dock and Harbour Board, he resigned. He was sixty-two years of age.

Wallasey Ferry Profits.

The surplus on Wallasey-Liverpool ferries for the year 1931-2 is £13,236, as against an estimate of £18,609. Expenditure is less than the estimate by £7,788. Against the savings must be set excess expenditure including rudder repairs on the "Marlowe" and the overhauling of "Royal Iris" to comply with the Board of Trade requirements, and £651 repairs to Seacombe Landing, including the re-decking of the entrance to the floating roadway, renewing rubbers and the installation of fog signals. Repairs at Liverpool Landing are up £192 in consequence of the installation of electric lighting and fog signals.

Proposal to Remove Ferry.

Proposals submitted by the Manchester Regional Town Planning Committee to the Manchester Ship Canal Company for the removal of the ferry at Cadishead to a more central position and its conversion to a vehicular as well as passenger ferry, have not borne fruit. The Ship Canal Company is opposed to a vehicular ferry being established on the ground that it would be dangerous in view of the increasing traffic along the waterway. A high level bridge, which the company suggest as an alternative, would seem to be out of the question, on the grounds of expense.

Lightship Run Down.

Recently a cargo steamer crashed into the Mersey Docks and Harbour Board lightship, the "Planet," necessitating her being withdrawn from her station at Formby. The master of the colliding ship was, as a result, summoned on two informations for (a) permitting his ship to strike against the lightship "Planet" in the Queen's Channel of the Mersey, and (b) failing to stand by until he had ascertained that the lightship was not in need of assistance. Mr. A. J. Hodgson, for the Mersey Docks and Harbour Board, said the steamer "Rutland" came down the channel and then passed the revetment headed west. The "Planet" was then heading N.N.E. and the "Rutland" came right down on her bowsprit. She bumped the "Planet" three times, the bowsprit broke away, and finally, after hitting the "Planet" a hard blow, she cleared her. Apparently the "Rutland's propellor also caught the mooring chain. The damage done to the "Planet" amounted to £200. The "Rutland," it was alleged, proceeded out to sea without stopping to ascertain what damage she had done. The defence pleaded that as the "Rutland" was in charge of a compulsory pilot, any carelessness in navigation must be that of the pilot and not of the master. It was held that one man should not be answerable for the conduct of another.

Weighing of Vehicles on Dock Bridges.

The rights of the police in ordering a motor driver to have his machine weighed when on a Mersey Dock Board bridge was questioned recently in the Liverpool Police Court during the hearing of a summons against George Hubert Mason, of Tilstock, for refusing to allow his vehicle to be weighed when requested by a police officer, after production of his authority under Section 27 of the Road Traffic Act. The offence was alleged to have been committed on the floating bridge leading from the Liverpool pierhead to the landing stage, and defendant was driving a steam lorry with trailer, which appeared to a police-constable to weigh in excess of the weights prescribed by Mersey Docks and Harbour Board regulations. The constable requested the driver to return to Canning Dock to have the load weighed, but he refused. In the witness-box the constable admitted he had no authority from the Dock Board, who were responsible for the floating roadway. Mr. Scholefield Allen, for defendant, said the constable was acting outside his jurisdiction in ordering the driver to have his vehicle weighed when it was on a private roadway and had not committed an offence against the Road Act. The weight allowed by the Road Traffic Act was 14 tons, whereas the Dock Board only allowed 12 tons. "Fourteen tons were allowed on the highway and on the new floating bridge at Seacombe, but when a vehicle has crossed the ferry to Liverpool the driver is faced with a floating bridge where only a 12-ton load is allowed." The Stipendary ruled that if a constable saw a lorry which he thought exceeded the weight stipulated in the Road Traffic Act he was allowed to follow it on to private property. The Act, in his view, gave the constable authority to have the vehicle weighed for any purpose. Defendant was fined 10s. In another case the defendant refused to have the vehicle weighed on the Liverpool side. The constable telephoned to Seacombe and the lorry was weighed there. As it was found to be over the weight allowed on the Liverpool roadway, he was fined.

Lloyd Barrage and Canal Excavation

THE Lloyd or Sukkur Barrage, which was opened recently, is the largest individual irrigation project in India or possibly in the world. It will bring perennial irrigation to an area of 6½ million acres, about half of which was previously uncultivated desert land; it should bring wealth and prosperity to a large area of Sind, a province remarkable for its deserts and the poverty of its inhabitants.

In clouds of desert dust. A Giant Ruston-Bucyrus Excavator, with 8-yd. bucket, digs a Main Canal.

The Sukkur Barrage project consisted of putting a barrage (or dam) across the Great Indus itself, shortly after it enters Sind. From the headworks radiate seven main canals which will give continuous irrigation over the large area mentioned.

The site chosen is at Sukkur, where the Indus has broken through a low barrier of sedimentary limestone, and where its width is accordingly considerably less than its average flood-level bed-width. The actual width across the main river spans, between the left and right bank canal regulators, is 4,600-ft. The height above low-water level to which the barrage will raise the water level, so that it flows into the canals, is about 12-ft.

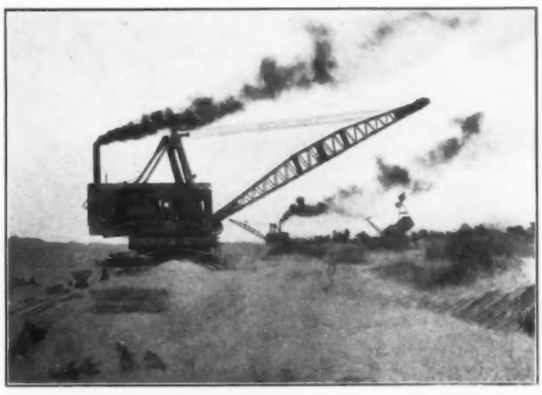
It is not the object of this article to deal with the actual construction of the barrage, but rather with the excavation of the canals. It would not be fair to pass, however, without remarking on the difficult engineering problem presented by the construction of the barrage on account of the peculiarities of the Indus.

When in full flood the flow past Sukkur has exceeded one million cubic feet per second, and the flow velocity reaches 10-ft. per second—almost seven miles an hour. The scour or erosion is tremendous and uncertain in its action and direction in flood time. The closing of the cofferdams each winter, preparatory to the three or four months' feverish work on the barrage foundation before the river rises again, has been a very anxious time, since a slight flood might undo the labour of months and imperil the work of a whole season.

The foundation consists of a concrete raft 190-ft. wide, with auxiliary and stone pitching to a total width of 430-ft., with lines of sheet piling at the upstream and downstream edges extending across the river. There are two auxiliary lines of piles under the raft, spaced towards the centre. The river bed silt is so deep that it is not possible to reach solid foundations, hence the raft form of construction, which has proved very successful on other barrage schemes. The stone used is quarried from the neighbouring sedimentary rock bar. It is a soft but serviceable stone, and the masonry subject to stream action is being faced with specially selected hard limestone blocks.

The foundation and piers were completed in three winter seasons, working from each bank simultaneously.

To turn to the canal excavation, the Sukkur Barrage is the first large project in India to entrust more than half of its canal excavation to dragline excavators. The decision in this direction was made on account of scarcity of hand labour in Sind, and the necessity for completing the canals to a time schedule. It was not at that time considered that economies in cost could be obtained by their use, since the cost of earthwork by hand labour in India is extraordinarily low—a small canal of, say, 20-ft. bed width can be constructed by hand at from 2½d. to 4d. per cubic yard, excavated according to the district of India concerned.



Two "Class 300" Ruston-Bucyrus Steam Draglines, with 8 cubic yard buckets, digging a main canal in the desert.

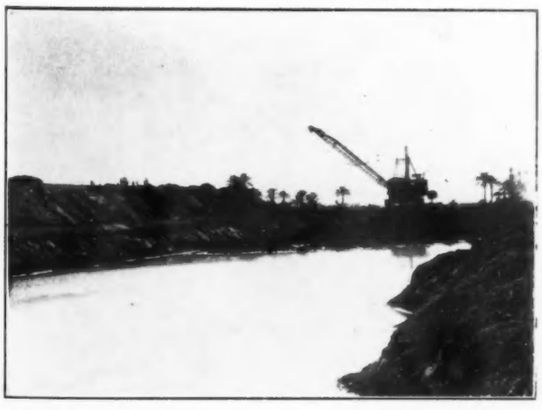
In practice, however, both on the Sutlej Valley project in the Punjab and the Sukkur Barrage, the draglines have worked, in the majority of cases, at considerably lower rates than the hand labour estimates, and effected great savings in the earthwork costs.

The total length of the main line canals and branches is about 1,600 miles, of the distributaries, 4,622 miles. The final feeders to the fields may amount to 50,000 miles. Leaving out the latter, which will, in general, be constructed by the farmers themselves on their own land, the excavation involved amounts in round figures to about 210,000,000 cubic yards, or about twice the total excavation of the Panama Canal.

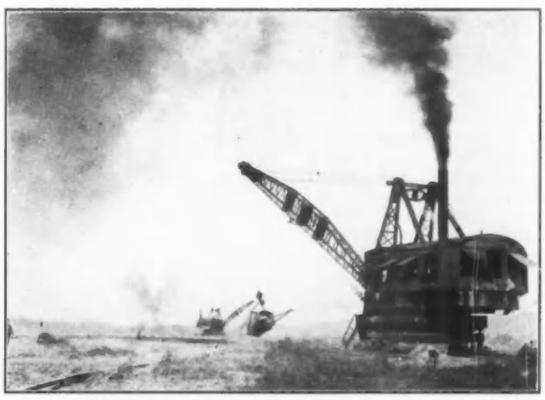
Almost all the main line and branch canals have been constructed with draglines, as are also quite a number of the distributaries in areas where it is difficult to obtain hand labour.

The total excavation allotted to the machines was about 120 million cubic yards, and since 1924, when the first large steam machine, a Class 320 christened "Wilson Bahadur," after Sir Leslie Wilson, Governor of Bombay Province, who attended the digging of the first bucketful, commenced work, an imposing total of 46 machines has been put to work. These are as follows:

9 Class 320 and 300 steam draglines on trucks, booms 100-ft. to 145-ft., buckets 10-yd. to 6-yd.
2 Class 24 Diesel electric draglines on caterpillar-type mountings, booms 125-ft., buckets 3-yd.
2 Class 135 steam draglines on trucks, booms 80-ft., buckets 4-yd.



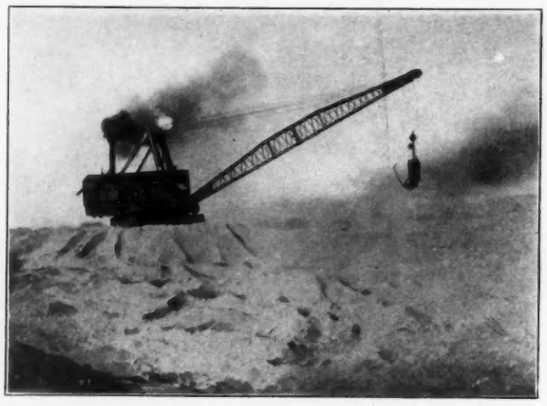
A Ruston-Bucyrus Excavator, with 8-yd. bucket, digging a Main Canal during the flood season in Sind.



A Pair of Giant Ruston-Bucyrus Excavators digging the 250-ft. wide Main Canal in the desert.

Lloyd Barrage and Canal Excavation—continued

3 Class 20 steam draglines on trucks, with booms 80-ft., buckets 3-yd.
9 50-B Diesel draglines on caterpillar-type mountings, with booms 45-ft. and buckets 1½-yd.
16 30-B Diesel draglines on caterpillar-type mountings, with booms 40-ft. and buckets 1-yd.
2 D-2 Diesel draglines on caterpillar-type mountings, with booms 35-ft. and buckets 1-yd.
3 No. 6 Diesel draglines on caterpillar-type mountings, booms 35-ft., buckets ⅞-yd.



Typical Sind Desert. A Giant Ruston-Bucyrus Excavator, with 8-yd. bucket, digging a Main Canal amidst the heat and dust.

All these machines were manufactured by the two companies Ruston & Hornsby and Bucyrus-Erie, now joined together in the Ruston-Bucyrus Company, and were so satisfactory from the start that, after the initial purchase of 11 large steam machines, the purchases were eventually increased, a few machines at a time, to the total mentioned of 46.

The main line canals are from 180 to 380-ft. in bed width where they leave the headworks at Sukkur; they narrow as they grow in length and branches and distributaries are taken from them. They vary in depth from 4-ft. to 20-ft. according to the contours crossed. In low places, borrow pits have to be dug to form canal banks.

The large machines work in pairs, each machine digging one-half of the canal and dumping the earth to form one canal bank.

The 300-ft. widths require the largest machines with 145-ft. booms, in order to obtain the necessary digging and dumping

Digging the 250-ft. wide Rice Canal in the Sind Desert. View taken from the revolving platform of a Giant Ruston-Bucyrus Dragline Excavator.

reach. The 380-ft. canal, the East Nara, is too wide even for these machines, and a portion of it has to be re-handled. Most of the large machines are arranged so that when the canal narrows they can be equipped with a large bucket and a section taken out of the boom.

The smallest distributaries go down to about 6-ft. bed width, and even these have been successfully and economically worked by means of the small Diesel machines. Between the main line canal and the small distributaries there are canal sections to be dug of intermediate widths, and the various machine sizes and boom lengths have been chosen to work them.

The Port of New Orleans

The Inner Harbour Navigation Canal was the scene of great activity during January, 1932. According to figures compiled and released by the Dock Board, during the month 1,014 vessels having a total tonnage of 398,114 tons used this important facility of the Port of New Orleans, an increase of 115 vessels and 36,358 tons, as compared with January, 1931.

The arrivals of inland watercraft having a tonnage of more than 25 tons also showed a marked increase. Of these vessels, 381 having a total tonnage of 167,225 tons arrived during the month, an increase of 102 vessels and 52,992 tons over January, 1931.

During the month of January, 205 sea-going vessels arrived in port. There were 190 departures of such vessels.

The sea-going vessels arriving during the month had a total gross tonnage of 874,981 tons, a decrease of 28,285 tons as compared with January, 1931.

Vessels using the public wharves during the month had a total gross tonnage of 688,445 tons, a decrease of 44,516 tons. There were 285,755 tons of cargo paying tollage.

There were substantial increases in some of the commodities moving over the port's wharves during the month. Among the imports, non-metallic minerals increased 6,535 tons, chemicals increased 2,217 tons, wood and paper increased 2,089 tons, animals and animal products increased 1,546 tons, and textiles increased 350 tons. Among the exports, textiles and vegetable food products increased 15,659 tons and 27,134 tons respectively.

During the month of January, 854,765 bunches of bananas were handled by the Dock Board's conveyors.

Net dock charges for the month amounted to $175,863.

Ships of 15 different nations made up the 205 sea-going vessels which arrived during the month. Of these vessels, 58 per cent., representing more than 57 per cent. of the total tonnage, flew the American flag. Honduras was second in number of ships and third in tonnage; Great Britain was second in tonnage, and Norway third in number of ships.

Following is a tabulation of the number of sea-going vessels showing gross tonnage and arranged by nationalities, which arrived during January, 1932:—

Nationality.	No. of Vessels.	Gross Tonnage.
American	119	503,274
British	14	99,496
Brazilian	2	10,883
Danish	3	6,897
Dutch	2	10,592
French	2	14,693
German	8	34,260
Honduran	19	66,741
Italian	5	30,932
Japanese	1	9,627
Nicaraguan	5	3,485
Norwegian	16	44,628
Panaman	1	4,370
Spanish	1	5,152
Swedish	7	29,951
	205	874,981

Weser River Shipping in January

The goods traffic on the Weser continues to decrease. The hopes of an increase in coal shipments by the reduction in the price of coal were not realised, partly due to the mild weather, but chiefly due to the reduction of the Reichsbahn tariff compared with the quite insufficient reduction of the State tug costs and canal dues for inland shipping.

In both directions 96,600 tons went through the Bremen Weser Lock in January compared with 109,600 tons in December and 131,600 tons in January, 1931. Downstream traffic was 66,200 tons, or 11,100 tons less than in the previous month. Coal transport decreased by 12,600 tons; potash, on the other hand, increased by 8,000 tons. Upstream, 30,400 tons, i.e., 1,900 tons less than in the previous month, were shipped.

From February 8th to 14th a stoppage of Weser shipping occurred on account of improvement work on the Doerverdener Lock. At the same time, from the 10th to 13th the two locks of the Bremer Weser Lock were closed on account of repairs.

Irish Harbour Matters

Dublin

Dublin Port and Docks Board.

At a meeting of the Dublin Port and Docks Board a letter of thanks was received from Miss McGloughlin stating that she had been asked by her father (Mr. C. E. McGloughlin, Chairman of the Board) to thank the members for their kind sympathy with him in his illness.

Mr. Wm. Baird, presiding, said that Mr. McGloughlin had been able to go home and now they might hope that he would long be spared, and would shortly resume his seat at that Board.

A tender by Messrs. Thomas Dockrell, Sons and Co., Ltd., of £424 13s. for the painting of eight bridges over the Liffey in preparation for the Eucharistic Congress, was accepted.

On the report of Mr. Joseph Mallagh, engineer, re tenders for three hopper barges, a discussion arose.

The Ardrossan Dockyard Co. tendered to build three barges for £3,700. The Dublin Dockyard Co. tendered at £4,295 for two barges, and the Ringsend Dockyard Co. at £2,165 for one barge.

Mr. James Larkin said that wages in Glasgow were the same as in Dublin and the materials could be put on the quays at North Wall at not more than 12 per cent. increased cost. They were willing to give home firms a 10 per cent. to 25 per cent. preference in order to give employment in the city. There must be something wrong with the Dublin tenders, he said, and he proposed that they be sent back.

Mr. Gillespie also expressed dissatisfaction with the figures.

The Lord Mayor (Ald. A. Byrne, T.D.) said it had been an experience where the cheaper tender was the dearer in the end, and where the material put in by the Dublin firm was 25 per cent. better in quality. He would ask the engineer to go into the details of materials and thought it would be worth their while giving the work to an Irish firm.

Mr. David Barry said that although he would yield to no one in his concern to keep the work at home if possible, he must point out the consequences of adopting such a course as that suggested. They could not now go to the local yard and say—"you have made a mistake of 70 per cent. in your costings; unless you remedy that we will have to hand the contract to a British yard." The firms which had read the advertisement and tendered according to the specifications, and put in lower prices, would believe that their tenders were only being used to bring down the local yard prices. In the future they would not tender because they would believe that they would not get fair play. They had to send away work more than once because they could not get it done in Dublin at a reasonable price.

Major Hollway and the Chairman expressed similar views.

Mr. Larkin said he thought that the Scottish firm ought to get the contract, but that the home firms' figures should be investigated.

The lowest tender, the Ardrossan firm's, was unanimously accepted.

The resignation of Mr. P. J. Lawrence as a member of the Board was accepted with regret. He had been chairman and vice-chairman of the Board twice. Mr. T. F. Laurie, of the Irish American Oil Co., has been co-opted in his place.

Dun Laoghaire (Kingstown) Harbour Master.

Captain C. Cassedy, Assistant Harbour Master, has been appointed Harbour Master, Dun Laoghaire in place of Capt. Frosbery Holmes, R.N., who has retired. Capt. Cassedy started his career as a Junior Clerk in the Irish Land Commission, but after a short time went to sea as an apprentice on the Castle Line of sailing ships. Obtaining his Master's and Extra Master's sailing certificate in due time, he took up steamship work, after some years experience of which he joined the staff of the Mersey Docks and Harbour Board. Two years ago he was appointed Assistant Harbour Master at Dun Laoghaire.

Limerick

Limerick Harbour Board.

The Mayor, Alderman P. J. Donnellan, presided at the annual meeting of the Limerick Harbour Commissioners.

The Secretary, in his annual report for 1931, stated that the number of vessels, excluding river craft, which entered the port for the year was 362, totalling 205,918 net register tons, as against 218,209 tons for the previous year, showing a decrease of 12,291 tons. This, however, does not mean that the year was a bad one from the point of view of the general trade of the port, the tonnage in 1930 being enhanced by the arrival of vessels for the shipment of contractors' plant on completion of the Shannon scheme.

The revenue from dues—dock tonnage, imports, exports, quayage and lights—amounted to £23,482 19s., showing an increase of £1,113 15s. 5d. as compared with the previous year. The ordinary expenditure amounted to £14,570 2s. 5d., showing a decrease of £431 14s. 2d. The capital expenditure in connection with port development schemes was £2,052 8s. 7d. At the end of the year the Board's investments amounted to £71,930 10s. 5d. in National Loans, 5 per cent. War Loan and Great Southern Railways 4 per cent. Debenture Stock.

The Secretary explained that there was 36,680 tons of increased tonnage during the year made up of bigger imports of wheat, maize, flour and feeding stuffs. There were decreases in the quantity of butter and the number of cattle exported. Nevertheless, as Mr. O'Dwyer remarked, the net revenue of the port for the year was £14,290, as against a deficit of £13,000 in the case of the Port of Cork.

The Mayor said that the financial statement regarding the trade of the port was very gratifying. They could, he believed, look to the future with confidence; there was every prospect that when the proposed schemes of port development were carried out that the business of the port would expand still further. These schemes would be carried out at a probable cost of £175,000.

Work on the Limerick dock extension scheme involving an expenditure of £139,943 13s. 11d. will probably be started early in April, a hitch which occurred with the contractors—the Netherlands Harbour Engineering Works, Amsterdam—having been overcome. Having had their tender accepted, the contractors suggested certain financial variations, and after a conference between Mr. Nyland, a representative of the firm, and the Board, an agreement was reached which was confirmed in the following letter from the company:—

> "With reference to previous correspondence and to the discussions our Mr. Nyland had the pleasure to have with your Board, we herewith beg to confirm the agreement arrived at with your Board upon herunder following amendments on the general conditions, specifications and schedule of prices to which the form of tender for the Limerick dock extension refers: (a) Retention money on the work to be 10 per cent. instead of 15 per cent. The retention money should be paid to us upon the engineer's final balance certificate, with interest added thereto at the rate of 5 per cent. per annum from the date from which the period of maintenance of twelve months is to accrue; (b) guarantee bond to be reduced from £40,000 to £10,000, we to provide a guarantee bond issued either by National Provincial Bank, London, or by a British Insurance Company to be approved by you; (c) advances, free of interest, up to £20,000 to be made to us in equal instalments of £5,000, during the first four months of the work and counted from the date of the engineer's order to commence work. We will provide securities against advances, in the form of quantities, issued either by the National Provincial Bank, London, or a British insurance company to be approved by you. These advances shall be redeemed by monthly instalments of £1,000, the redemption to start at the end of the fifth month, counted from the date of the commencement of the work."

This letter was regarded as satisfactory and the Board's engineer said he believed that operations would start early in April.

A motion approving of the contractors terms having been passed, it was decided to notify them accordingly.

The Mayor of Limerick has received semi-official information that the Minister for Finance has approved of the issue of a guarantee loan under the Guarantee Loans Act whereby the Harbour Board will be enabled to borrow £100,000 for the carrying out of the extension of the floating dock.

Belfast

Review of the Work at Belfast during 1931.

At the annual meeting of the Belfast Harbour Commissioners, Mr. R. E. Herdman, D.L., the Chairman, made an important speech, reviewing in detail the work of the past year. He said that the Board's total revenue for the period amounted to £295,944, which was £22,633 less than that of the previous year. This reduction, however, was anticipated, as at the beginning of 1931 the Commissioners made large reductions in the harbour rates on goods and on vessels, it being estimated that the reductions would amount to about £20,000.

Since 1922 the Board had effected reductions in harbour charges equivalent to £80,000, from which it would be obvious that they had dealt drastically with all dues and charges over which they had control. They had, of course, no control over other charges, such as port labour rates, towage, etc.,

Irish Harbour Matters—continued

which must be the subject of direct action on the part of shipowners and traders themselves. There was an increase of 119,833 tons in the net register of vessels cleared during the year, the total tonnage cleared being 3,820,251, which was the highest recorded in the history of the port.

The increase in the tonnage of vessels, however was not accompanied by an increase in the goods traffic, which showed a reduction of 68,555 tons on the previous year. The falling-off represented only two per cent. of the total amount of goods passing through the port, and was remarkably slight in the depressed state of industry.

In addition to the vessels cleared, on which harbour rates were paid, during the year 221 Atlantic liners, of a total tonnage of 2,293,564 entered Belfast Lough to embark or land passengers. That tonnage was not included in the Board's returns, as the vessels did not come within the Commissioners' statutory limits and consequently did not pay harbour rates.

The cost of working and administration, which formed the greater part of the Board's expenditure, amounted to £148,774, which was £7,550 less than in the previous year. The remaining items of expenditure, taken collectively, amounted to £129,771, and represented income tax, interest on capital, etc., and Sinking Fund contributions. The total expenditure under all headings amounted to £275,485, as against £279,588 in 1930, and after balancing receipts and payments, there was a surplus of £20,459, which had been carried to the Unappropriated Receipts Account.

The Board's indebtedness to the holders of harbour stock was £1,314,602, which, as the result of the extinction of harbour stock purchased in the open market out of Sinking Fund monies, was £14,970 less than the corresponding figures for 1930. This £1,314,602, with £150,000, which was borrowed on an issue of Belfast Harbour Bonds, and the sum of £142,475, due to the Belfast Banking Co., made a total of £1,607,077, as approximately representing the Commissioners' outside liabilities. The other items represented the Board's own Depreciation and Sinking Funds.

Against these liabilities the other side of the account showed that the Commissioners' assets, represented by property, plant, craft, etc., stood in the books at £3,842,637, but the actual value of these assets might fairly be regarded as considerably greater than the book figures.

The amounts set aside for Sinking Funds, and the interest received on the various investments, which had been made on behalf the the Sinking Funds, with cash in the hands of the Bank, amounted to £586,986 15s. 6d. The members of the Board would, he thought, agree that the financial condition of the undertaking was one of unimpaired strength and stability, and that the interests of harbour stockholders and bond holders were more than amply secured.

On works of general improvement an expenditure of £11,038 had been incurred. The expenditure under borrowing powers on works specifically authorised by Act of Parliament came to £143,336 during the year and represented work on the new dock and turning basin on the Co. Antrim side of the river and the new channel leading thereto, which, when completed, were estimated to cost about £400,000. He was glad to say that very satisfactory progress had been made with these works, which, with the new mill being erected by Messrs. Joseph Rank, Ltd., had been affording employment to 500 men.

The year which had just passed had been a trying one to all engaged in business. The Belfast Harbour Commissioners had fully realised this and had done all in their power to assist the traders of the port in these adverse times. In addition to concessions in rates at the beginning of last year, the Board had been able quite recently to make concessions in rates on lying-up vessels in the harbour, and to improve the graving dock equipment of the port, so as to assist the local shipbuilding industry which at present was suffering severe depression.

While it could not be said that the outlook for the future was quite clear, the resolute way in which the country had grappled with its difficulties afforded grounds for confidence. The new fiscal policy of the Imperial Government would, it was hoped, afford assistance to some of their industries, and the reclamation schemes carried out by the Board would offer excellent opportunities for the establishment of industries on most advantageous terms.

Excellent sites, abutting on the waterways of the harbour, and with connections to the various railway systems, were available, and manufacturers who contemplated manufacturing within the British tariff might well give thought to the advantages to be gained by establishing themselves in Belfast, which, by virtue of its geographical position, was admirably situated as a distributing centre and could afford unsurpassed advantages in the matter of low rates and dues.

Mr. Herdman concluded by referring to the most efficient staff, making special mention of the services of Mr. Watkin, the general manager and secretary, Mr. Gilbert, the consulting engineer, and Captain McIntyre, the harbour master.

The report of the accounts for the year was adopted on the motion of Mr. Herdman, seconded by the Right Hon. J. Milne Barbour.

Belfast and the Question of a Free Port.

At another meeting of the Belfast Harbour Board, the general manager referred to the Tariff legislation and the possibility of measures becoming necessary to enable traders to deal expeditiously with dutiable goods.

Correspondence between Sir Joseph McConnell, Bt., one of the Ulster members in the Imperial Parliament, and the general manager, as to the question of creating a free port within the port of Belfast, was submitted.

The general manager said he had also been in communication with the Ulster Ministry of Commerce on the subject.

It was agreed that the matter had not reached a stage at which any decision could be made as to whether provision would be necessary to meet the new situation, and it was understood that the general manager would keep the matter in view.

Rising Traffic.

The report of the Harbour Master showed that 295 vessels arrived in the port from the 14th to the 27th February, as follows:—Coastwise and cross-channel, 273; foreign, 21; non-trading, 1.

The total tonnage of the vessels which arrived from 1st January to the 27th February was:—Coastwise and cross-channel, 434,863, an increase of 332 over the corresponding period last year; foreign, 131,095, an increase of 15,113; non-trading, 1,452, a decrease of 8,925. Total, 567,410, an increase of 6,520.

Large Electric Windlasses

Anchor Handling Machinery on the "Strathnaver" and "Strathaird"

The two new turbo-electric P. and O. liners, the "Strathnaver" and "Strathaird," which the Peninsular and Oriental Steam Navigation Co. have recently put on their passenger and mail services between London, Bombay and Australian ports, have occasioned considerable interest in modern engineering circles.

The deck machinery of these two vessels presents several features worthy of consideration. Each windlass is required to deal with a 3 $\frac{5}{16}$-in. diameter cable, and are each equipped with two 100 b.h.p. motors below deck. These motors are mounted on the same bedplate and operate through worm gearing running in an enclosed oil bath; 30-in. diameter warping ends are fitted on the main shaft for slow warping, and powerful screw band brakes are provided to control the veering of the cables. All the windlass gearing, including the large intermediate spur wheel, is of cast steel. The bedplate centre stands, side frames, and cable holders are of semi-steel. All the bearings are gun-metal bushed.

Modern practice in windlass design is further marked in these gears by the use of adjustable shaft bearings and side frame and centre stands of massive box section.

The windlass is arranged to drive a port and starboard warping capstan, situated forward of the windlass, through bevel gearing having machine-cut teeth.

The control gear is of the Clarke, Chapman Patent "Ward Leonard" Booster Control Type, which is specially suitable for windlass and capstan work. This method of control gives load protective features similar to that of the steam windlass. Current peaks from supply are avoided under all conditions and the windlass can be stalled as safely as steam gear. The whole control is made absolutely foolproof.

It is interesting to notice that in addition to the above, Messrs. Clarke, Chapman and Co. have supplied large windlass and capstan gears with their patent system of control to such modern vessels as "Reina del Pacifico," "Orari," "Opawa," "Otaio," "Rangatira," "Bermuda," and the "Georgic."

One of the most outstanding of these machines is the cable lifting capstan gear supplied to the m.v. "Georgic," the cables of which have a diameter of 3 $\frac{7}{16}$-in.

Jugoslavian and Near Eastern Port Matters.

ACCORDING to information received it would appear that three new electric cranes of a capacity of two tons each have been placed on the main quay at Split (Dalmatia). In this connection it ought to be noted that a project has just been worked out in regard to the construction of a new port at Split, but it does not appear that the Jugoslav Government has the necessary funds for this enterprise. In the last three weeks there has been, however, an improvement in shipping at Sussak, so that it is possible that conditions may improve in the near future.

Figures for Greek shipping during the twelve months of 1931 have just been published, and are summarised as follows:—

	ARRIVALS				CLEARANCES			
	1931		1930		1931		1930	
	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
Greek ...	1,011	924,288	1,128	1,045,320	439	430,346	583	538,750
American	31	104,166	47	141,853	32	105,322	43	143,886
British ..	227	498,899	307	611,169	150	237,283	257	458,164
Dutch ...	53	95,942	42	57,866	43	59,778	58	78,539
French...	140	400,473	138	441,728	120	395,612	119	386,470
German	109	203,115	97	151,108	101	178,663	92	142,752
Italian ...	925	2,108,829	966	2,185,826	849	1,962,889	870	1,981,206
Roumanian	104	123,018	95	113,081	96	122,017	79	101,419
Other flags	610	879,872	540	551,440	453	721,813	327	373,349

The above figures confirm more or less what has been written in previous articles in connection with the situation of shipping at Greek ports, since it will be seen from these figures the progress made by the Dutch and German flags, which maintain regular steamship services between the North Sea ports and the Levant. An improvement will be noticed in the Roumanian flag, due chiefly to the increase of sailings which took place at the end of 1931 by the Serviciul Maritime Roman on the Constanza-Pireaus-Alexandria Line with the object of securing a larger share in the transit of the Polish-Egyptian trade through Roumania. The predominant position of the Italian flag even over the Greek flag itself is very pronounced, and there is no doubt that the influence of the reorganisation of the services of the Lloyd Triestino, including an increase of callings at Pireaus, will also be felt in the first part of 1932.

Pireaus, of course, occupies the first place among Greek ports, and in this respect it may be interesting to consider the following figures regarding trade at that port during 1931:—

PORT OF PIREAUS	ARRIVALS				CLEARANCES			
	1931		1930		1931		1930	
	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
Greek ...	572	648,471	572	687,267	138	319,722	207	449,096
American	31	104,166	43	136,061	5	16,639	10	34,161
British ...	138	319,722	207	449,096	41	73,453	109	225,594
Dutch ...	26	56,703	15	24,847	6	6,638	10	14,737
French...	126	396,050	121	416,423	117	383,566	111	357,168
German	67	103,644	65	104,524	18	28,826	16	25,690
Italian ...	401	933,934	395	1,002,148	378	917,755	383	929.749
Roumanian	94	114,517	82	107,973	87	112,361	77	99,183
Other flags	298	601,014	251	354,754	227	519,010	129	227,000

The problem of the Port of Pireaus still attracts the attention of the Greek Government, since its difficult financial position hinders the carrying out of the programme of improvements. On the other hand, the fact that the Organismos Limenos Pireos (Pireaus Harbour Board) has taken up unloading and loading operations, and that the receipts of steamship agencies have thus been greatly curtailed, since they used to undertake unloading and loading on their own account, has caused much disappointment in certain shipping quarters at Pireaus.

Salonika follows Pireaus, in order of importance, among Greek ports, and its trade during the twelve months of 1931 may be summarised as follows:—

PORT OF SALONIKA	ARRIVALS				CLEARANCES			
	1931		1930		1931		1930	
	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
Greek ...	38	38,291	38	49,415	25	29,822	14	14,100
American	—	—	3	5,384	15	49,792	19	62,722
British ...	20	44,695	23	43,872	22	37,692	29	50,033
Dutch ...	60	126,281	6	9,031	65	138,011	3	4,077
French ...	3	1,182	6	7,236	—	—	6	27,325
German	5	6,988	1	1,651	12	19,534	4	6,007
Italian ...	46	77,185	60	126,281	48	93,099	65	138,011
Roumanian	10	8,501	12	4,222	—	—	—	—
Others ...	54	72,943	39	40,214	60	86,463	41	46,073

The most striking improvement, besides the progress of the British flag, is the large increase in the Dutch flag, which has exceeded even the share of the Italian flag, which used to occupy one of the leading places among foreign countries at Salonika.

Before closing these notes of Greek shipping, it may be interesting to also consider the figures for Patras, which reached during 1931 an important position among Greek ports:—

PORT OF PATRAS	ARRIVALS				CLEARANCES			
	1931		1930		1931		1930	
	No.	N.R.T.	No.	N.R.T	No.	N.R.T.	No.	N.R.T.
Greek ...	28	71,992	34	79,349	12	52,977	13	53,434
American	—	—	—	—	3	9,082	7	22,075
British ...	20	31,154	24	33,133	24	31,679	33	46,180
Dutch ...	13	18,545	12	13,127	6	5,980	2	2,002
French ...	—	—	2	543	—	—	—	—
German...	12	13,982	17	23,370	10	11,975	8	10,131
Italian ...	111	459,534	147	489,845	65	418,297	61	358,519
Roumanian	—	—	—	—	—	—	—	—
Other flags	98	80,920	81	57,382	4	3,804	15	16,145

During 1931 the construction of the Port of Patras was resumed, the appropriate system for putting an end to the slippings, which have been noticed in the new quays, having been found. The construction of that quay was started about a year ago.

In order to facilitate the bunkering of ships loading in the principal ports of the U.R.S.S., the Ugleexport (Russian Government Coal Export Department) have created coal stores at Nicolaieff, Odessa, Kherson, Theodosia, Mariupol, Berdiansk, Novorossisk and Poti. According to information secured from reliable sources, it would appear that large dredging works have been carried out recently at Odessa. Steamers of 8,000 to 10,000 tons may, with absolute safety, draw alongside the quays in order to load minerals, sugar, etc., as well as grain, by elevators.

However, the Russian Government is paying considerable attention to the harbour facilities at Mariupol, which include the coaling port fitted with porticos and travelling platforms having a total capacity of 125,000 tons per month, that is, about 4,000 tons daily. Since the Russian authorities believe that the exports of Russian coal are to increase to a great extent, a scheme has been worked out for the enlargement of this coaling port, and the construction of appropriate facilities to sort the coal imported from the mines.

Entering Novorossisk was rather difficult last winter, and the Russian authorities are considering the opportunity of reorganising their nautical service and enlarging the outer harbour. Grain is loaded by means of the grain silos, which can load 4,000 tons of wheat in 48 hours on a single ship. The port of Novorossisk also includes an oil dock consisting of 25 tanks of a capacity of 2,500 tons in all, and in general two days are sufficient to load 8,000-ton tankers.

It is stated that a delegation of Dutch harbour engineering experts have recently visited Samsoun and Trebizonde in order to examine the possibility of building a new port there. However, the situation has become extremely difficult, especially since the Ivar Kreuger concern has been largely interested in public works construction in Turkey, including the building of railways and ports, and the Turkish Government now finds it impossible to carry out the programmes already started, owing to the lack of funds.

The Egyptian Government (according to messages from Cairo) has decided to transform the small port of Marsah Matrouth, west from Alexandria, and to build about 500 metres of quayage there, which will be used by small ships. It would appear that later on other works are to be carried on there.

Following information secured from the Chamber of Commerce at Alexandria, shipping at that port during the month of February, 1932, included 31 Italian ships, representing 92,179 net registered tons; 37 British ships and 89,031 net registered tons, 11 French ships and 57,002 net registered tons, 6 American ships and 37,100 net registered tons, etc. Shipping during the first part of the year has shown a slight decrease at Alexandria, while in the course of the last few weeks there has been a revival due to the heavy exports of onions and other fresh vegetables to Continental ports. Trade between Egypt and the Eastern Mediterranean ports and with British ports has represented the bulk of shipping at Alexandria.

It is stated that the Egyptian Government has taken into consideration the possibility of lightening the taxation of shipping calling at Egyptian ports. Special attention is being paid to the tonnage employed on the mail services, and it would appear that an understanding is about to be reached between the Egyptian Government and some of the agents of the European shipping concerns to reduce the harbour charges for ships which are engaged in regular services and are carrying mails.

WANTED

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The Port of New York

Latest Data issued by the Bureau of Commerce

Industrial Transportation in New York Harbour: Sand, Gravel and Crushed Stone.

AMONG the materials widely used in construction operations of all kinds in this age of concrete are sand, gravel and crushed stone, and enormous quantities of these materials are consumed in the port area annually. Being bulk commodities handled in large volume and of comparative low value, they are most economically transported by water. The numerous rivers, bays, and estuaries in the Port of New York have been improved with a system of secondary channels of 10, 12 and 14-ft. depths, which make large transportation possible to nearly every community within the metropolitan area. The exploitation of trap-rock quarries along the upper Hudson River and of sand and gravel pits along the north shore of Long Island and the Raritan River has been stimulated by their proximity to these waterways, which lead to the Port of New York.

According to figures compiled by the War Department and published in the Annual Report of the Chief of Engineers, 4,152,770 tons of crushed stone and 9,288,855 tons of sand and gravel were delivered in scows in various parts of the port area during the calendar year 1930. Because of the general use of these materials, and since deliveries by scow are made within trucking distances of their ultimate consumption, the distribution covers every part of the port that can be served by boat. Clamshell bucket derricks and raised hoppers are therefore to be encountered on all waterfronts.

The sand and gravel pits on the north shore of Long Island are situated mainly in Hempstead Harbour, Huntington Bay, and Port Jefferson Harbour, 25 to 56 miles by water from the Battery, where puffing steam shovels make permanent changes in the landscape by eating into and removing the high banks. In Port Jefferson Harbour sand and gravel is also obtained from the bottom of the bay through the use of hydraulic dredges. Although vast quantities are being continually removed and shipped in scows, the visible supply is sufficient to satisfy the needs in the metropolitan area for many years to come. These diggings represent large industries covering many acres of ground, their equipment including screening and washing plants and, in some instances, miles of narrow gauge railway for the handling of the material with dump cars. Sand and gravel is also obtained from points on the Raritan River and South River, N.J., as well as from points on the upper Hudson River. Ninety-three per cent. of the sand and gravel delivered in the port in 1930 was shipped from Long Island, 4 per cent. from Raritan and South Rivers, N.J., and 3 per cent. from points on the upper Hudson River.

Most of the trap rock quarries supplying the port district with crushed stone are located at various points on the Hudson River from about 36 to 70 miles north of the Battery. They, too, are extensive works. After blasting in the quarry, the rock is conveyed to crushers, then screened, washed, and conveyed to the loading bins.

The scows employed in carrying sand, gravel and stone are about 115-ft. long with 33 to 35-ft. beam, and 10-ft. vertical sides. They carry from 600 to 750 cubic yards and draw from 9 to 10-ft. loaded, the decks being almost awash. The sand and gravel scows come in from Long Island Sound in large tows, which are generally broken up at stakeboats maintained by the sand and gravel companies in the East River in the vicinity of Rikers Island and Whitestone. Hell Gate is usually navigated with tows of not more than 4 scows, because of the currents which are apt to make long tows unmanageable.

Stakeboats are maintained in various parts of the harbour, for the holding of loaded boats awaiting distribution, as well as for the collection of empty scows. The tows of crushed stone boats were formerly tied up at the " market " at the foot of West 52d Street, from which point they were distributed. The " market " has recently been removed to the foot of West 135th Street, as the pier at 52d Street has been demolished to make way for a new modern steamship pier.

Grain Exports in 1931.

The volume of grain shipped to foreign ports from the Port of New York during the calendar year 1931 amounted to 60,435,336 bushels, a gain of 5 per cent. over the previous year. This increase was due to gains in amount of domestic grain passing through the port. Shipments of Canadian grain in transit, which form the bulk of grain traffic through this port, fell off slightly.

	1931 Bushels	1930 Bushels	Net Change Amount	Per Cent.
Domestic and Canadian Grain	60,435,336	57,793,457	+2,641,879	+4.6
Domestic Grain	9,475,547	3,059,156	+6,416,391	+209.7
Canadian Grain	50,959,789	54,734,301	—3,774,512	—6.9

Value of Foreign Trade at the Port of New York.

The value of foreign trade during the month of December, 1931, at the Port of New York amounted to $143,777,000, as compared with $194,810,000 in the same month of 1930, a drop of 26 per cent. Exports declined from $95,807,000 in December, 1930, to $55,940,000 in December, 1931, a drop of 42 per cent., while imports fell off 11 per cent. from $99,003,000 to $87,837,000.

	December 1931 $	December 1930 $	Net Change Amount $	Net Change Per Cent.
Exports	55,940,000	95,807,000	—39,867,000	—41.7
Imports	87,837,000	99,003,000	—11,166,000	—11.3
Exports and Imports	143,777,000	194,810,000	—51,033,000	—26.1

Foreign trade at the Port of New York for the year 1931, as reported by the United States Department of Commerce, was valued at $1,929,659,000, slightly higher than the preliminary estimate given last month, but 32 per cent. less than that of 1930. The foreign trade of the entire United States amounted to $4,513,991,000, a decline of 35 per cent. from 1930. The Port of New York handled 42.7 per cent. of the nation's commerce.

New York leads in Exports of Manufactures.

Half of the exports through the Port of New York in 1931 were classified by the United States Department of Commerce as machinery, vehicles, metals and manufactures. Automobiles, electrical appliances, typewriters, adding machines, tractors, printing presses bulk large in the commerce of the port.

Shipments of machinery and vehicles fell off 38 per cent. in 1931 compared to 1930. Metals and manufactures declined 51 per cent. Part of this decline in value is due to lower prices.

The total exports for 1931, as classified by the Department of Commerce, were as follows:—

Value of Exports of Domestic Merchandise, Calendar Year 1931.

Commodity Group	Via the Port of New York $	Per Cent. of U.S.
Machinery and Vehicles (automobiles, electrical machinery, etc.)	336,431,646	69.3
Metals and Manufactures	86,389,372	47.5
Vegetable Food Products and Beverages (including grain)	63,455,535*	24.7
Animals and Animal Products (Edible—meats, provisions, etc.)	57,268,832	48.7
Non-metallic Minerals (coal, oil, etc.) ...	56,704,033	15.2
Textiles (including raw cotton)	56,228,696	13.4
Chemicals	48,752,195	48.7
Vegetable Products (Inedible)	39,937,358	21.4
Animal Products (Inedible—furs, leathers, etc.)	39,203,159	62.8
Wood and Paper (including lumber)	12,608,848	12.9
Miscellaneous	49,949,049	52.9
Total ...	$846,929,223	35.5

*Grain of domestic origin only, not including Canadian grain in bond which makes up 80 per cent. of the exports from the port.

Most of the bulk commodities, such as coal, oil, cotton and lumber, moves through ports nearer the West Virginia mines, Texas, Oklahoma and California oil fields, Southern cotton plantations and north-west Pacific forests. High-grade manufactures, on the other hand, find the Port of New York the logical outlet because of its propinquity to the larger industrial areas, as well as its fast and frequent steamship sailings.

Commerce at Port Newark.

The amount of lumber unloaded from vessels at Port Newark during the month of January, 1932, was 5,187,000 board feet. This is a decline of 67 per cent. from the January, 1931, figure of 15,837,000 feet.

The inland shipments from Port Newark were 9,214,000 board feet, of which 1,849,000 feet moved by railroad car and 7,365,000 feet by truck.

Receipts by vessel of cargo other than lumber amounted to 10,896 tons, a gain of 3,456 tons, or 47 per cent. over the same period last year. Included in these receipts were 1,778 tons of potatoes from Maine.

Sixteen steamers arrived at Port Newark during the month, compared with 23 in January, 1931.

Vessel Movements in Foreign Trade.

The number of entrances and clearances of vessels in foreign trade at the Port of New York during the month of January, 1932, as compared with the same period in 1931, was as follows:

	January, 1932 No. of Vessels	January, 1932 Vessel Tonnage	January, 1931 No. of Vessels	January, 1931 Vessel Tonnage
Entrances ...	428	2,262,853	486	2,417,338
Clearances ...	452	2,302,135	542	2,533,711

The Port of New York—continued

Steamship Passenger Traffic.

Approximately a quarter of a million less people travelled abroad via the Port of New York in 1931 than during the year previous. Arrivals totalled 395,944, against 584,627 entering in 1930. Departures dropped to 475,567 from 540,200 in 1930. Almost half of the decrease can be charged against incoming aliens. Immigrants fell off 92,074 and non-immigrants 31,494 from the 1930 figures. Citizen travellers decreased 120,941 during 1931, almost equally divided between arrivals and departures. The only class showing an increase for the year was alien emigrants with a total of 46,512 or 12,254 more than departed in 1930.

A statement of foreign passenger traffic for the years 1930 and 1931 is as follows:—

	Port of New York		Total U.S. Atlantic and Gulf Ports	Per Cent. New York to Total
	Year 1930	Year 1931	Year 1931	Year 1931
Inbound—				
Aliens, Immigrant	118,934	26,860	29,197	91.9
Aliens, Non-Immigrant ...	135,726	104,232	118,900	87.7
U.S. Citizens	329,967	264,852	334,602	79.2
Total ...	584,627	395,944	482,699	82 0
Outbound—				
Aliens, Emigrant	34,258	46,512	51,947	89.5
Aliens, Non-Emigrant ...	169,036	147,975	167,456	88.4
U.S. Citizens	336,906	281,080	353,936	79.4
Total ...	540,200	475,567	573,339	82.9
Total Inbound and Outbound ...	1,124,827	871,511	1,056,038	82.5

Although the number of travellers abroad declined in 1931, the domestic steamship services from the Port of New York reported a small increase during that period. The increase, however, was mostly due to a greater number of travellers using the Hudson River services between New York, Albany and Troy. In 1930, a total of 1,066,214 travellers were reported using the Intercoastal, Coastal, Sound and Hudson River routes compared with 1,078,966 for 1931. This figure does not include one-day excursionists but only through traffic.

Steamship Sailings.

A decline in foreign and intercoastal sailing from the Port of New York took place in January as against the same month last year. Foreign sailings in particular dropped with curtailment of schedules in a number of the important routes, such as the Baltic, French Atlantic, Italy-Mediterranean and South American (East Coast). Total regular sailings in January of this year over all foreign routes numbered 296, 88 less than the 384 reported for the first month of last year. Cruises, however, nearly doubled. During January 34 cruises to the West Indies, South America, Mediterranean, Around the World, etc., started from the Port of New York. On Saturday, January 9th, 8 cruises cleared on trips ranging from 5 days or more in the West Indies to a 4 months' tour of the world. This is a record number of pleasure voyages from a single port in a day.

Saturday, January 30th, was the peak sailing day of the month, with a total of 85 vessels leaving the port, 44 to foreign and 41 to other domestic harbours. The 44 foreign sailings included 5 to the United Kingdom, 3 to Rotterdam-Antwerp, 2 to Italy, 11 to Caribbean-Mexican ports, 2 to the River Plate, 3 cruises to the West Indies and Mediterranean and 3 tankers.

The 41 domestic sailings included 10 to South Atlantic and Gulf ports, 8 tankers and 3 coal carriers.

Terminal Efficiency at New York.

An unusually fast loading operation was reported by the Anchor Brocklebank Line vessel " Matheran," which sailed from Pier 56 N.R. to United Kingdom ports. This vessel docked at 7.50 p.m. on Monday, February 15th, and ten minutes later started to load 4,439 tons of cargo. Loading was continued through the night and completed next day, the 16th, at 7 p.m. Allowing for meals, it took exactly 22 hours for 436 stevedores, checkers, etc., to stow this cargo. Records show that the loading gangs handled slightly more than one-half ton per man per hour.

Part of the cargo comprised 6,300 barrels and 15,500 boxes of apples.

Another instance of fast service in this port was reported by the White Star liner " Majestic " on January 4th. This vessel returned from a West Indies cruise with 1,224 passengers arriving here at 12.30 p.m. on that day. At 6.30 p.m., exactly 6 hours later, the " Majestic " sailed for Cherbourg and Southampton after disembarking the cruise passengers and taking aboard 3,000 tons of fuel oil, 2,000 tons of fresh water, 550 tons of express freight, 1,150 bags of mail, and 400 passengers bound for Europe.

New York State Canal System.

During the 1931 season 3,722,012 tons of freight were transported on the New York State Barge Canal System, a gain of more than a hundred thousand tons over last year. This is the largest tonnage moved since the completion of the modern system in 1918.

The increasing use of the canal, particularly by self-propelled motor ships, handling as much as 1,800 tons each, has led to demand for further improvement. By deepening the canal to 14-ft. between locks, elevating low-level bridges to a minimum of 20-ft. clearance, and widening at strategic points, the following benefits may be realised:—

1. Boat capacity can be increased 25 to 40 per cent.
2. Speed can be increased, cutting down present running time of 72 hours from Oswego to New York and 144 hours from Buffalo to New York by motor ship.
3. New ships can be designed for canal operation with a freeboard sufficiently high to permit longer season of operation on the Great Lakes, and a winter season operation in Atlantic coastal waters.
4. The possibility of 12-month operation on canal, lake, and coastal waters will stimulate the construction of modern self-propelled motor ships, adding greatly to the available equipment on the canal.

Since 83 per cent. of the traffic on the canal is interstate, according to the State Superintendent of Public Works, it is logical that further improvement should be made with federal funds. In a report dated April 4th, 1930, the Chief of Engineers, U.S. War Department, found that the improvement programme outlined above would cost about fifty million dollars and would be justified by the increased traffic and transportation savings within the next ten or fifteen years. The Chief of Engineers further pointed out that the practical working capacity of the Canal system from the Hudson River to the Great Lakes is 6,800,000 tons, as against the potential demand for transportation of 7,500,000 tons by 1938.

A Bill providing for authorisation of a project to carry out the proposed improvement with federal funds granted to the State of New York for this purpose has been introduced in Congress by Representative Joseph A. Gavagan, New York City, who is a member of the Rivers and Harbours Committee of the House. This Bill is known as H. R. 9497 and reads as follows:—

" Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the work of improvement of the New York State Barge Canal is hereby adopted and authorised to be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers in accordance with the plan recommended in the report contained in House Document Number 29, Seventy-first Congress, second session, at an estimated cost of $50,000,000.

" Sec. 2. The Secretary of War is hereby directed to prepare detailed plans and specifications for the effectuation of such improvement, including the deepening of such canal to fourteen feet between locks, the raising the level of bridges crossing such canal so as to provide a vertical clearance of twenty feet, and the widening of such canal at such places and to such dimensions as the Secretary of War shall deem advisable.

" Sec. 3. The State of New York through its duly authorised agency may submit to the Secretary of War statements setting forth the improvements to such canal proposed to be made by it in accordance with the detailed plans and specifications prepared by the Secretary of War pursuant to the foregoing section, together with the estimated cost thereof. If the Secretary of War approves, he shall promptly notify such agency of the State of New York. All work thereunder shall be undertaken by the State of New York in accordance with its laws and under the supervision of its duly authorised agency, subject to the inspection and approval of the Secretary of War. Upon the completion of such improvements the Governor of the State shall certify the cost thereof to the Secretary of War, and if he shall find that same has been constructed in compliance with such plans and specifications he shall certify the fact to the Secretary of the Treasury, who shall thereupon cause the costs thereof to be repaid to the State of New York. The Secretary of War may, in his discretion, from time to time direct the Secretary of the Treasury to make payments to the State of New York as the work progresses in such amounts as the Secretary of War and the duly authorised agency of the State of New York may jointly determine.

" Sec. 4. Payments made under this Act in any fiscal year shall not exceed the amounts allocated in any annual War Department Appropriation Act for the effectuation of such improvement.

" Sec. 5. The portions of such canal improved pursuant to this Act shall remain forever free from tolls for the use thereof and the improvements constructed under this Act shall thereafter be maintained by the State of New York. If at any time the Secretary of War shall find that such improvements are not being properly maintained he shall give notice thereof to the duly authorised agency of the State of New York, and if the work of putting such improvements in a proper condition of maintenance is not commenced within four months thereafter, the Secretary of War shall refuse to approve any further improvements and shall cause to be withheld any moneys payable to the State of New York under this Act."

The Port of Palermo

(Continued from page 164)

Future Development of the Port.

What are the prospects for the future development of the Port of Palermo?

Before considering this question it is necessary to go into the details of shipping at Palermo since 1896, and which are given in the following schedule:—

ARRIVALS

Year	No.	Steamers: Tons of Goods Arrived Foreign Ports	Steamers: Tons of Goods Arrived Italian Ports	Steamers: Passengers Arrived Foreign Ports	Steamers: Passengers Arrived Italian Ports	Sailing Vessels No.	Sailing Vessels Tons of Goods Unloaded Foreign Ports	Sailing Vessels Tons of Goods Unloaded Italian Ports	Total Tons of Goods Italian & Foreign Ports
*1896	1,838	294,086		40,941		1,750	110,820		404,906
1901	1,899	221,529	58,864	1,393	47,772	1,535	14,408	89,910	384,711
1906	2,009	232,000	95,437	4,502	66,354	1,422	10,918	99,040	457,395
1911	2,206	360,134	98,204	8,625	93,165	1,404	13,864	111,492	583,694
1916	844	243,731	64,433	1,771	23,667	1,361	1,819	63,781	373,764
1917	374	154,063	21,814	724	2,899	845	424	31,709	208,010
1918	456	240,849	11,628	4,189	3,586	923	545	24,408	277,430
1919	1,030	252,659	61,583	6,751	107,285	1,428	1,820	43,958	360,020
1920	1,226	321,206	61,365	7,538	109,146	1,339	6,673	72,992	462,236
1921	1,516	423,618	70,932	11,693	98,761	2,005	36,647	73,141	604,338
1922	1,733	400,995	85,691	6,701	87,729	2,276	13,873	82,196	582,755
1923	1,699	389,881	70,950	5,689	93,597	2,000	18,223	80,207	559,261
1924	1,697	364,174	91,505	7,271	118,917	2,168	26,983	97,978	580,640
1925	1,859	383,304	130,611	7,022	120,708	1,878	20,247	82,114	616,276
1926	1,804	361,574	118,108	5,538	103,634	2,555	24,312	93,073	597,067
1927	1,906	442,648	109,061	6,043	102,543	2,859	18,084	80,232	650,025
1928	1,973	432,348	110,735	5,046	97,014	2,371	20,847	86,409	650,339
1929	1,994	412,848	121,881	5,286	90,671	1,339	27,083	79,448	€41,260
1930	1,931	380,515	119,517	5,049	75,299	847	26,296	86,930	613,258

CLEARANCES

Year	No.	Steamers: Tons of Goods Shipped Foreign Ports	Steamers: Tons of Goods Shipped Italian Ports	Steamers: Passengers Cleared Foreign Ports	Steamers: Passengers Cleared Italian Ports	Sailing Vessels No.	Sailing Vessels Tons of Goods Shipped Foreign Ports	Sailing Vessels Tons of Goods Shipped Italian Ports	Total Goods Shipped to Italian & Foreign Ports
*1896	1,849	258,359		24,159		1,755	17,749		276,108
1901	1,899	169,153	23,667	7,277	51,125	1,557	1,454	16,257	210,531
1906	2,010	191,258	45,298	44,626	74,448	1,425	560	20,752	257,868
1911	2,205	163,244	32,712	28,461	71,596	1,409	2,283	42,316	240,555
1916	846	84,210	34,295	7,037	25,142	1,381	1,192	27,136	146,833
1917	376	60,290	14,159	1,992	4,081	858	1,151	5,879	81,479
1918	451	45,882	13,021	1,162	3,704	894	854	9,151	68,908
1919	1,034	82,173	29,642	9,976	96,035	1,460	553	17,579	129,947
1920	1,226	87,297	23,230	21,573	110,521	1,332	1,260	9,900	121,687
1921	1,509	65,562	37,158	16,212	99,049	1,990	885	19,541	123,146
1922	1,744	89,792	23,263	3,153	118,241	2,277	€10	14,881	128,546
1923	1,706	84,717	25,544	8,511	95,347	2,010	1,365	19,005	130,631
1924	1,699	81,904	29,782	10,262	111,797	2,154	1,716	19,055	132,457
1925	1,859	114,278	30,309	9,501	122,122	1,886	1,349	20,257	166,693
1926	1,797	107,218	35,091	9,069	103,737	2,558	556	21,516	164,381
1927	1,912	105,925	22,221	9,363	98,276	2,858	410	19,590	148,146
1928	1,971	103,563	21,447	6,716	92,516	2,364	131	17,851	142,992
1929	1,990	115,259	19,778	4,026	81,171	1,349	106	15,411	150,554
1930	1,929	120,030	30,206	3,757	78,154	846	477	8,318	159,031

Year	No.	Total Traffic Tons of Goods Arrived and Shipped Foreign Ports	Total Traffic Tons of Goods Arrived and Shipped Italian Ports
*1896	7,192	681,014	
1901	6,890	406,544	188,698
1906	6,866	434,736	260,527
1911	7,224	539,525	284,724
1916	4,432	330,952	189,645
1917	2,453	215,928	73,561
1918	2,724	288,130	58,208
1919	4,952	337,205	152,762
1920	5,123	416,436	167,487
1921	7,020	526,712	200,772
1922	8,030	505,270	206,031
1923	7,415	494,186	195,706
1924	7,718	474,777	238,320
1925	7,482	519,178	263,791
1926	8,714	493,660	267,788
1927	9,535	567,067	231,104
1928	8,679	556,889	236,442
1929	6,327	555,296	236,518
1930	5,553	527,318	244,971

ARRIVALS

Country	Year	No.	Steamers Tons of Goods Unloaded	Steamers Passengers Arrived	Sailing Vessels No.	Sailing Vessels Tons of Goods Unloaded	Total Steamers & Sailing Vessels No.	Total Steamers & Sailing Vessels Tons of Goods Unloaded
Belgian ...	1929	16	862	—	—	—	16	862
	1930	15	1,407	—	—	—	15	1,407
Danish ...	1929	40	10,632	—	—	—	40	10,632
	1930	34	1,725	—	—	—	34	1,725
Greek ...	1929	15	31,279	—	—	—	15	31,279
	1930	15	20,484	—	—	—	15	20,484
French ...	1929	43	17,287	1,105	—	—	43	17,287
	1930	39	7,826	711	—	—	39	7,826
German ...	1929	90	11,876	6	—	—	90	11,876
	1930	88	15,405	7	—	—	88	15,405
Japanese ...	1929	6	—	—	—	—	6	—
	1930	—	—	—	—	—	—	—
British ...	1929	177	62,133	46	—	—	177	62,133
	1930	130	37,794	17	—	—	130	37,794

* For the year 1896 it has been impossible to distinguish the goods and passengers arrived from Italian Ports from those from foreign ports.

ARRIVALS—continued.

Country	Year	No.	Steamers Tons of Goods Unloaded	Steamers Passengers Arrived	Sailing Vessels No.	Sailing Vessels Tons of Goods Unloaded	Total Steamers & Sailing Vessels No.	Total Steamers & Sailing Vessels Tons of Goods Unloaded
Dutch ...	1929	54	11,471	—	—	—	54	11,471
	1930	65	20,095	—	—	—	65	20,095
American ...	1929	21	61	—	—	—	21	61
	1930	33	1,419	—	—	—	33	1,419
Norwegian ...	1929	33	4,840	—	—	—	33	4,840
	1930	31	5,695	—	—	—	31	5,695
Russian ...	1929	—	—	—	—	—	—	—
	1930	1	—	—	—	—	1	—
Jugoslav ...	1929	4	4,914	—	—	—	4	4,914
	1930	16	26,778	—	—	—	16	26,778
Spanish ...	1929	14	34,172	—	—	—	14	34,172
	1930	9	17,088	—	—	—	9	17,088
Swedish ...	1929	16	2,332	—	—	—	16	2,332
	1930	14	5,574	—	—	—	14	5,574
Other Flags	1929	11	11,924	—	—	—	11	11,924
	1930	11	2,789	—	—	—	11	2,789
Total Foreign Flags	1929	540	203,783	1,157	—	—	540	203,783
	1930	501	164,079	735	—	—	501	164,079
Total Italian Flags	1929	1,454	330,946	94,800	1,339	106,531	2,793	437,477
	1930	1,430	335,953	79,613	847	113,226	2,277	449,179
General Total	1929	1,994	534,729	95,957	1,339	106,531	3,333	641,260
	1930	1,931	500,032	80,348	847	113,226	2,778	613,258

CLEARANCES

Country	Year	No.	Steamers Tons of Goods Loaded	Steamers Passengers Departed	Sailing Vessels No.	Sailing Vessels Tons of Goods Loaded	Total Steamers & Sailing Vessels No.	Total Steamers & Sailing Vessels Tons of Goods Loaded
Belgian ...	1229	16	3,843	—	—	—	16	3,843
	1930	15	2,289	—	—	—	15	2,289
Danish ...	1929	40	4,995	—	—	—	40	4,995
	1930	34	4,196	—	—	—	34	4,196
Greek ...	1929	15	—	—	—	—	15	—
	1930	15	—	—	—	—	15	—
French ...	1929	43	5,135	1,426	—	—	43	5,135
	1930	39	2,839	1,177	—	—	39	2,839
German ...	1929	89	19,311	—	—	—	89	19,311
	1930	89	20,711	—	—	—	89	20,711
Japanese ...	1929	6	1,273	—	—	—	6	1,273
	1930	—	—	—	—	—	—	—
British ...	1929	175	25,549	3	—	—	175	25,549
	1930	132	19,813	4	—	—	132	19,813
Dutch ...	1929	54	3,169	—	—	—	54	3,169
	1930	65	3,925	—	—	—	65	3,925
American ...	1929	21	5,046	—	—	—	21	5,046
	1930	33	13,287	—	—	—	33	13,287
Norwegian ...	1929	33	6,093	—	—	—	33	6,093
	1930	31	6,123	—	—	—	31	6,123
Russian ...	1929	—	—	—	—	—	—	—
	1930	1	200	—	—	—	1	200
Jugoslav ...	1929	4	—	—	—	—	4	—
	1930	16	560	—	—	—	16	560
Spanish ...	1929	14	1,740	—	—	—	14	1,740
	1930	9	1,795	—	—	—	9	1,795
Swedish ...	1929	16	356	—	—	—	16	356
	1930	14	512	—	—	—	14	512
Other Flags	1929	11	—	—	—	—	11	—
	1930	11	31	—	—	—	11	31
Total Foreign Flags	1929	537	76,510	1,429	—	—	537	76,510
	1930	504	76,281	1,181	—	—	504	76,281
Total Italian Flags	1929	1,453	58,527	83,767	1,349	15,517	2,802	74,044
	1930	1,425	74,255	80,730	846	8,795	2,271	83,050
General Total	1929	1,990	135,037	85,196	1,349	15,517	3,339	150,554
	1930	1,929	150,236	81,911	846	8,795	2,775	159,031

Imports.

It will be noticed that the quantity of goods unloaded has increased from 404,906 tons in 1896 to 583,694 tons in 1911, and from this figure to slightly over 600,000 tons in 1930. In other words while in the pre-war period shipping at Palermo showed an increase of about 180,000 tons of goods, in the post-war period it has only shown an increase of 40,000 tons. However it should be noted that imports from foreign ports have increased from 235,937 tons in 1899 to 406,811 tons in 1930, showing an increase of 170,874 tons, while the imports of goods from home ports have increased from 148,774 tons in 1899 to 206,447 tons with an increase of 57,673 tons. There has been a bigger increase in the imports from foreign countries than in the imports from Italian ports, which shows the increasing importance of Palermo as an international shipping centre, and this result is also confirmed in taking both imports and exports together. As a matter of fact while the total shipping with foreign ports at Palermo had grown from 539,525 tons in 1911 to 567,067 tons in 1927, trade with Italian ports has shown a decrease from 280,000 tons in 1911 to 260,000 tons in the post-war period. It is impossible to obtain detailed statistics regarding the main items of imports and exports during the period between 1900-1913, but the figures for the immediate post-war period illustrate the situation of shipping in the Port of Palermo. It may be interest-

The Port of Palermo—continued

ing, therefore, to examine the figures for imports, which are as follows:—

IMPORTS		1926	1927	1928	1929	1930
Coal	Tons	186,065	223,966	216,934	214,882	91,938
Wheat	,,	41,571	44,249	47,037	38,645	23,300
Maize	,,	2,325	4,164	4,350	3,275	6,000
Oats	,,	5,182	5,124	5,058	1,944	8,000
Flour	,,	20,324	13,741	13,730	16,253	16,183
Coffee	,,	726	768	854	842	855
Sugar	,,	4,698	4,566	4,823	4,534	1,557
Oils	,,	995	1,451	1,632	1,846	4,217
Marna	,,	34,130	64,542	52,213	58,400	64,307
Phosphates ...	,,	—	11,452	—	8,777	7,897
Lumber	,,	22,965	27,823	32,129	30,484	49,290
Wood Coal ...	,,	7,995	5,942	6,541	8,931	19,512
Oil	,,	5,650	5,951	4,939	2,949	13,599
Chemical Fertilizer	,,	10,400	10,790	7,747	6,801	10,897
Acids	,,	1,324	1,514	968	762	283
Automobiles ...	No.	15	150	397	658	172
Pianos	,,	177	155	276	313	244
Frozen Meats ...	Tons	610	609	430	740	665
Total Goods unloaded, excluding Pianos & Automobiles	Tons	345,152	426,957	400,058	401,036	318,916

As a matter of fact, figures for 1930 should not be taken into consideration in view of the fact that they have been influenced by the general trade depression, and though a comparison between the figures for 1926 and 1929 does not disclose a large increase in the import of coal it should be considered that in the last three years there has been an improvement in the exploitation of the hydro-electric resources of Sicily, while considerable trade has been attracted towards South Sicilian ports, in view of the improvement of harbour facilities there. But the importance of Palermo as a port is chiefly noticeable by the progress in the imports of marna (to make cement) and of lumber.

Exports.

The exports from Palermo in the post-war period are summarized as follows:—

EXPORTS		1926	1927	1928	1929	1930
Oranges	Tons	25,795	11,303	8,029	14,619	9,517
Lemons	,,	104,974	87,970	80,628	96,396	105,505
Tomato Sauce ...	,,	6,058	7,246	6,416	8,016	2,059
Almonds	,,	2,525	3,381	1,521	3,201	2,222
Sulphur Olive Oil ...	,,	1,247	1,328	947	1,418	922
Olive Oil	,,	1,862	985	793	2,802	1,596
Citric Acid	,,	1,297	886	2,694	2,658	1,792
Tartar	,,	1,226	747	1,581	1,957	1,045
Sommah	,,	12,468	15,978	16,254	13,791	9,928
Cork	,,	941	1,395	960	2,454	1,032
Total Goods Shipped	,,	158,393	131,219	119,823	147,342	135,618

Palermo has dropped considerably as a shipping centre for citrus fruits, but if one considers that the harbour enlargements and improvements which are being carried on, include also the construction of warehouses where perishable goods can be stored, and that the increased harbour facilities are to attract new steamship connections between Palermo and overseas ports, there is no doubt that sooner or later things will improve, especially when it is taken into account that the Fascisti Government has paid considerable attention to the problem of the improvement of railway connections between Palermo and the interior of Sicily.

Dredger at Work in the Central Part of the Port.

Owing to the fact that the Società di Navigazione Italia (Flotte Riunite Cosulich; Lloyd Sabaudo and Navigazione Generale) is shortly putting on the express service between Genoa, Naples, Palermo and New York, large liners such as the "Rex" and the "Conte di Savoia," the opportunity is being considered of slightly altering the original project for the construction of the port. These alterations would include the construction of a connection between the outer breakwater and the Northern Mole, in order to form an outer port, with a depth of 15 to 25 metres, and where 50,000 gross ton liners could anchor stern to quay.

It will be seen that efforts are being made to put the Port of Palermo into a position to exploit its geographical position, and to play an important role among Mediterranean ports. It is difficult to forecast what the final issue of these efforts will be, but there is no doubt that if one takes into account the large productive capacity of Sicily there are many chances that the trouble which has been undertaken to construct the new port of Palermo will be amply repaid.

Port of Southampton Topics

Statistics for February still showing Declines.

Southampton Docks statistics for February confirm the impression that shipping at the port has been very quiet. Substantial declines are shown under a number of headings, and as the returns for February, 1931, were below those of February, 1930, the drop is all the more regrettable.

The number of vessels inward dropped by 20, the total slipping back from 223 to 203; and outward the figure was 199 against 220, a decrease of 21.

The falling off in the number of ships was reflected in the tonnage returns, the gross inward declining by 25,711 tons and outward 27,041 tons. The figures were: Inward, 792,426, as compared with 818,137; and outward, 784,164, as against 811,205. The inward net tonnage figure was 424,764, or 12,278 less than the total of 437,042 in February, 1931; outward the return was 411,625, in comparison with 435,560, a decline of 23,935 tons.

The bright spot is in cargo tonnage, for in that there was a big increase, doubtless brought about to some extent by the rush of certain goods into this country prior to March 1st, when the new import duties came into operation. At the same time there were numerous large cargoes discharged at Southampton which did not have any direct bearing on the duties.

At all events, the inward cargo increased by 12,218 tons during February, the total being 41,574, as against 29,356. Outward there was a decline of 1,500 tons, the total being 29,569, in comparison with 31,069.

The number of passengers using the port in February was less than in the corresponding month last year, but the decline was not a heavy one. Inward there was an increase of 15 persons, the figure being 5,653, as against 5,638. Outward, however, there was a drop of 645, the total slipping back from 6,678 to 6,033.

The trooping movements for the month were also lower than that for the corresponding month in 1931, the inward decrease being 1,605, and outward 1,945. The totals were: Inward, 4,803 as against 6,408, and outward, 2,899 as compared with 4,844.

Southampton maintains her position as Premier Passenger Port in United Kingdom.

Although there was a substantial decline in the number of passengers to or from places out of Europe who embarked or arrived at the principal ports in the United Kingdom in 1931, Southampton enjoyed a bigger percentage of the whole than ever before in her history, and therefore still retains her position as premier passenger port.

Of the total of 468,825 passengers outward and inward about 38 per cent. used Southampton, 23 per cent. Liverpool, and 18 per cent. London. The respective percentages in 1930 were 35, 25 and 15.

The number of passengers using Southampton last year was 92,796 outward and 86,209 inward. The Liverpool figures, the next highest, were respectively 53,858 and 54,823.

The Southampton totals, of course, show a considerable drop compared with 1930, when the number of outward passengers was 126,837 and the number of inward 92,240.

Dock and Harbour Authorities' Association

Report of the Executive Committee for the Year ended 31st December, 1931

THE Annual General Meeting of the above Association was held at Caxton Hall, Caxton Street, Westminster, W.1, on Wednesday, the 17th February, 1932, when the Committee presented the Twelfth Report of the Proceedings of the Association, which was adopted.

Meetings.

In addition to the Annual General Meeting of the Association held in London on the 18th February, 1931, there have been seven meetings of the Executive Committee and 17 meetings of Sub-Committees during the year. The Association has been represented at two Conferences with Ministers and at numerous meetings with Government Departments and other bodies.

Thirty-two Circulars, including two Interim Reports (May and September) have been issued to members on various matters during the year (a list of the principal ones is given at the end of the Report).

Executive Committee, etc.

The Committee again elected Lord Ritchie of Dundee, the Chairman of the Port of London Authority, as their Chairman for the year.

Mr. T. A. Peace, who represented the Bristol Channel District, resigned in March, and the vacancy on the Committee was filled, under Rule 7 (1) (E), by the appointment of Mr. R. H. Jones, the Acting General Manager of the Port of Bristol Authority.

The Committee record with great regret the death last July of Sir Hugh Bell. Sir Hugh was one of the founders of the Association, and had been Chairman of the Executive Committee from 1919 to 1926, and President in 1927. The obligations the members are under to Sir Hugh for his services to the Association are realized by all.

The Executive Committee passed the following resolution at their meeting on July 29th, moved by the President, seconded by the Chairman, and supported by the Hon. Secretary.

> The Committee record their deep appreciation of the valuable services rendered by Sir Hugh Bell in the formation of the Association and also in its early days for his guidance as Chairman which contributed so largely to the Association being set up on a satisfactory basis for the benefit of the various interests represented.

The Committee also regret having to record the death in January of Mr. W. C. Bacon, Chairman of the Manchester Ship Canal Co., and President of the Association in 1929.

Sub-Committees.

The following were appointed during the year:—

Railway Matters.—Mr. J. H. Estill, Mr. M. Kissane, Mr. A. H. Roberts, Mr. T. A. Peace, Mr. L. A. P. Warner, and the Hon. Secretary, with Mr. J. D. Ritchie and Mr. E. A. Moorhouse added for Railway Rates Inquiry questions and the Railway Bills of the Session.

Dock and Factory Matters.—Mr. Kissane, Mr. J. Macfarlane, Mr. Peace, Mr. Warner, Mr. M. G. Matthews, and the Hon. Secretary, with Mr. Ritchie and Mr. Moorhouse added for the purposes of (a) the Factories Bill, and (b) Dock Police—Exchequer Grant, and Sir John H. Irvin added for the purposes of (b).

Rating and Valuation Matters.—Mr. D. O. Dunlop, Mr. Moorhouse, Mr. Ritchie, and the Hon. Secretary, with Mr. Kissane added for Railway Assessment matters under the Railways (Valuation for Rating) Act, 1930.

International Maritime Conventions.—Mr. Roger Clayton, Major E. G. Finch, Mr. Ritchie, and the Hon. Secretary.

Duties, etc., of Harbour and Pilotage Authorities.—Mr. B. L. Nairn, Major Finch, Mr. Macfarlane, and the Hon. Secretary.

Subscriptions of Harbour, Conservancy, Irish Free State and Pilotage Authorities—the Chairman, Mr. W. Hewat, and the Hon. Secretary.

Buoyage and Lighting of Coasts.—Commander J. Whitla Gracey, R.N.R., Captain F. W. Mace, R.N.R., Mr. D. Alan Stevenson, Major Finch, and the Hon. Secretary.

River Pollution Matters.—Major Finch, Mr. J. H. Amos, Cmdr. E. C. Shankland, and the Hon. Secretary.

Members.

The Association this year comprised 46 Authorities, who handled a tonnage (excluding Irish Free State and Pilotage, etc., Authorities not covered by the Board of Trade Returns) representing nearly 70 per cent. of the total tonnage of vessels with cargoes arriving at and departing from the Ports of the United Kingdom.

Bills in Parliament.

The undermentioned Bills were considered and action taken where necessary to protect the interests of members:—

Session 1930-31.

(1) Bills which passed, with date of Royal Assent, in 1931.

	Royal Assent.
(*a*) *Public Acts.*	
Ancient Monuments	June 11th.
Expiring Laws	December 1st.
Finance	July 31st.
Finance (No. 2)	October 5th.
National Economy	September 30th.
Public Works Loans	September 30th.
Workmen's Compensation	June 11th.
(*b*) *Private Acts.*	
Great Western Railway	July 8th.

(2) Bills which did not pass into Law:—

Advertisements Regulation (Amendment); Consumers' Council; Hours of Industrial Employment; Industrial Councils; Merchant Shipping (Safety and Load Line Conventions); Oil Pollution; Petroleum; Rural Amenities; Slaughter of Animals; Town and Country Planning; Works Councils.

Great Western Railway Act, 1931.

Application for Increased Rates and Charges at Railway-owned Docks.

The Annual Report for 1930 (pages 12-14) informed the members that three of the amalgamated railway companies, viz., the London Midland and Scottish, London and North Eastern, and Southern Railways had obtained increased charging powers for their Docks by their respective Acts of 1930. The charging section (No. 7 of the London and North Eastern Railway (No. 2) Act) common to the three Acts, was set out as Appendix A to Circular 208.

The Great Western Railway, the fourth of the amalgamated Railway Companies, applied for similar powers by their Bill of 1931. The Dock Charges Clause in the Bill as introduced (now Section 32 of the Act) was identical with the Clause in the 1930 Acts of the other Companies, with the exception of an addition to paragraph (8), directing the Minister or the body or person holding the Inquiry to take into account "the probable net revenue to be earned from the rates, dues and charges to be levied or made by the Company at the harbour dock and pier undertaking of the Company specified in Schedule I of the Order of 1930 in relation to the total capital expenditure incurred upon those undertakings."

Subsequently, the promoters deleted these words before the Bill reached Committee in deference to the request of the Minister of Transport who stated that he had power to take capital expenditure into consideration on a revision without any express words.

Two important additions to the clause were made in Committee of the House of Commons, namely, a proviso to Sub-clause (1) and a new Sub-clause (3). These, together with the Association's letter to the Minister of Transport and to the Great Western Railway, both dated January 21st, 1931, are attached to Interim Report No. 1 (Circular 234).

Further alterations were made in Committee of the House of Lords, their object being to simplify the wording of the Clause and to state more clearly the Company's obligations.

The Association did not petition against the Bill in either House.

Generally speaking, the result of Section 32 is that the Railway Company is relieved of the necessity of applying annually under the Harbours Docks and Piers (Temporary Increase of Charges) Acts, 1920 and 1922, for the continuance of its increased charging powers. The section, however, entitles traders and other interested parties, including Dock Authorities, to require the Railway Company at intervals of not less than five years to apply to the Minister for a review of all the rates dues and charges at its docks and harbours, and the first requirement for a review can be made in October, 1932. Further, during the currency of any Order made by the Minister in consequence of such a requisition as aforesaid, either the Company or any interested body may apply to the Minister at intervals of not less than one year to revise all or any of the rates, dues and charges then authorised, the onus of proving the necessity for a revision falling upon the applicant.

If such an application as last aforesaid is made for a revision of all the rates, dues and charges and not only some of them,

Dock and Harbour Authorities' Association—continued

then the next opportunity for requiring the Company to apply for a general review shall be put off until the expiration of five years from the decision on the application.

A copy of Section 32 is set out in Appendix A to the second Interim Report (Circular 239).

Finance Act, 1931.
Part III.—Land Value Tax.

The Land Valuation Bill (No. 214), which was introduced in June, 1930, but subsequently withdrawn, contained an exemption from valuation of the land of statutory companies and undertakings so long as it was land which could not be alienated by the owner or appropriated for purposes unconnected with their undertaking. It was then pointed out by the Association to the Government that such an exemption would be of little value as nearly all statutory companies had power to alienate their lands, and reasons were put forward why full exemption should be given.

The 1931 Bill as introduced, gave complete exemption both from valuation and taxation to the lands of statutory authorities, and this exemption was not altered during the progress of the Bill:—

The exemption is effected as follows:—

Section 11 (6) provides that no land unit shall be valued when the Inland Revenue Commissioners are satisfied that it is exempt from tax.

Section 24 (1) provides that " No tax shall be chargeable in respect of any land unit not subject to a lease granted for a term exceeding fifty years which has commenced for any period during which the unit—— "

(d) "is owned by a body of persons authorised by any special Act or Order having the force of an Act to construct, erect or carry on as its principal business any railway, canal, inland navigation, dock, harbour, tramway, gas, electricity, water or other public undertaking."

The following is a summary of the other paragraphs of Sub-section (1):—

(a) exempts Government land,
(b) exempts land of local and drainage authorities, including lands of a statutory authority authorised " to construct, erect or maintain as its principal business any embankment or sea or river wall,"
(c) exempts lands owned by the National Trust,
(e) exempts land owned by persons whose principal business is the provision of houses for the working classes subject to the stated conditions,
(f) exempts land owned by persons who can claim exemption from income tax under certain provisions of the Income Tax Act, 1918, or the Finance Act, 1921,
(g) exempts land owned by Friendly Societies.

Sub-section (2) of Section 24 contains further exemptions for certain lands such as playing fields, open spaces, sites of churches, etc.

The reason for the exemption of lands of public authorities was given by the Solicitor-General to the late Government (Sir Stafford Cripps) when opposing amendments for further exemptions (H. of C. Debates, 24th June, col. 476), as follows: Because the profits of these undertakings " have to go to the reduction of the dues that are charged . . . and as the community gets the whole of the profit there is no reason why a land tax should be charged on this property."

For further information, particularly relating to relief from tax in cases of leases over 50 years (Section 25 (1) of the Act), members are referred to Interim Report No. 2 and its Appendix C (Circular 239).

The present Chancellor of the Exchequer (Mr. Neville Chamberlain) stated in the House of Commons on the 8th December that the Government had decided to suspend work upon the valuation under this part (Part III., Land Value Tax) of the Finance Act, 1931, and that the necessary legislation will be included in the 1932 Finance Bill (H. of C. Debates, 8th December, col. 1694).

Town and Country Planning Bill, 1931.

This Government Bill passed Committee Stage in the House of Commons (First House) shortly before Parliament rose last July, but proceeded no further owing to the dissolution.

The Association with the Railway Companies' and Canal Associations, met the officials of the Ministry of Health on the question of the exclusion of the lands of statutory undertakers from Planning Schemes, with the result that a new Clause (37) was inserted in the Bill. This is attached to Appendix B of Circular No. 239.

The Betterment and Compensation provisions affecting statutory undertakers were materially amended. An authority or arbitrator under Clause 38, in determining whether any property belonging to statutory undertakers has been injuriously affected or increased in value, will have to have regard exclusively to the value of the property for the purposes of the undertaking.

" Statutory undertakers " are defined (Clause 48) as meaning " any person authorized by or under an Act of Parliament, or an Order having the force of an Act of Parliament, to construct, work, or carry on any railway, canal, inland navigation, dock, harbour, tramway, gas, electricity, water, or other public undertaking."

Clause 23 and Third Schedule, Part II.
Restrictions on Acquisition of Land.

The Bill as drafted gave statutory and local authorities complete exemption from having their lands compulsorily acquired. The exemption, however, was modified in Committee, and as the Bill stands the protection that the lands of these authorities cannot be taken without their consent is coupled with a condition that such consent must not be unreasonably withheld, and the question of reasonableness is to be decided by the Minister of Health.

A Bill for the same objects was formally introduced by the Minister of Health on 10th December. The Bill has been referred to the same Sub-Committee who considered the 1931 Bill.

Expiring Laws Act.

This Act, which obtained the Royal Assent on the 1st December, extends the Harbours, Docks and Piers (Temporary Increase of Charges) Act, 1920, for another year until the 31st December, 1932, and the Canals (Continuance of Charging Powers) Act, 1922, for three years until the 31st December, 1934.

Attention was drawn to this matter by Circular 239.

Railways Act, 1921.

1931 Review of " Standard Charges " and " Exceptional Charges."

In compliance with the agreement dated 12th October, 1927 (Circular 127, 21st November, 1927), the Railway Companies supplied the Association with Accounts relating to their Dock Undertakings for the year 1930, which showed that a number of these undertakings were being carried on at a loss or with an inadequate return in relation to capital expenditure thereon.

The Committee followed the same course as they adopted on the First Review in May, 1929, and on the 1930 Review, and lodged Notices of Objection with the Railway Rates Tribunal with a letter attached addressed to the Railway Companies, calling attention to the above facts as showing that the Railway Companies were not making adequate charges in respect of their Dock and Harbour Undertakings and reserving their right to appear and make their submissions should the Tribunal propose to modify the charges.

The Review was held on the 11th, 12th and 13th May. The Railway Companies, as before, did not lay before the Tribunal any proposals for a general modification of charges.

The Tribunal in a written Judgment dated 27th May (Year 1931, No. 11) stated that nothing in the Review had established that under present conditions any modification or modifications would enable the Railway Companies to earn their respective standard revenues. Therefore no modifications were necessary and they made none.

Allocation of Charges between Railways and Docks.

This matter was referred to during the Review and Mr. Duffield, the Ministry of Transport representative, stated that conversations were proceeding between the Ministry and one of the Railway Companies with regard to it (Circulars 234 and 239).

The Association has asked the Ministry to inform them of the proposals put forward and give them an opportunity of being heard before the principles on which the allocation of through or combined charges as between railways and docks are determined.

Railways (Valuation for Rating) Act, 1930.

Railway Assessment Authority.
Rating of Railway-owned Docks and Harbours.

The Assessment Authority set up under the above Act, for the purpose of determining the net annual value of a Railway Company's undertakings and apportioning that value among all the various hereditaments occupied by the Company in accordance with an apportionment scheme, consulted the Association when preparing this scheme and accepted amendments suggested by the Association with a view to ensuring that the whole value of each Railway Dock Undertaking to the Railway should be taken into consideration.

Dock and Harbour Authorities' Association—continued

The final Scheme has now been laid before both Houses of Parliament and it is expected that the Minister of Health will shortly make an Order confirming the Scheme with or without modification.

Budget Statement—10th September.

Allowance on Plant and Machinery.

The Chancellor of the Exchequer, Mr. Philip (now Lord) Snowden, when introducing the Supplementary Budget for the year 1931-32 on the 10th September, made an important statement on the above subject to the effect that an increased allowance would be made in the Finance Act of 1932 for depreciation on plant and machinery which was intended to be equivalent to the increase of 6d. in the standard rate of income tax imposed by the Finance (No. 2) Act, 1931.

The statement taken from the House of Commons Official Report of 10th September, 1931, cols. 304-5, is set out in full in Circular 243.

Steps to give effect to the above undertaking have already been taken, and attention is drawn to the statements of the Board of Inland Revenue, reported in " The Times " of 17th December, 1931, and 12th January, 1932, and to the leading article on the latter date.

Grants to Dock and Harbour Authorities for Works to relieve Unemployment.

Claim to Income Tax.

Seaham Harbour Dock Company v. W. F. Crook (H.M. Inspector of Taxes).

The Crown appealed to the House of Lords from the Judgments of the Court of Appeal (the Master of the Rolls, Slesser and Romer L. JJ.) holding that the grants are in the nature of capital and are not annual profits or gains and so not liable to tax. The Judgments are referred to on page 18 of the Report for 1930, and in Circular 215.

The Appeal was heard by the House of Lords (Lords Buckmaster, Warrington of Clyffe, Atkin, Tomlin and Macmillan) on the 24th November, and dismissed with costs, the House not calling upon Counsel for the Respondents (the Harbour Company) to argue.

While confirming the Judgment of the Court of Appeal the House of Lords have found in the Harbour Company's favour on even wider grounds than those stated by the Court of Appeal (Circular 215). Members were sent a copy of the Judgments with Circular 248.

Important passages from these are as follows:—

Lord Buckmaster, in giving the principal Judgment, finds that the grant was not a trade receipt, nor did it bear any resemblance to a trade receipt. " It was a grant which was made by a Government Department with the idea that by its use men might be kept in employment, and it was received by the Dock Company without any special allocation to any particular part of their property, either capital or revenue . . . with the idea that by so doing people might be employed."

Lord Atkin states that the grant " has nothing to do with their trade in the sense in which you are considering the profits or gains of the trade." And continues that whether the money is employed for capital or for revenue purposes " in neither case is the money properly said to be brought into a computation of the profits or gains of the trade."

And Lord Macmillan completely disposes of Mr. Justice Rowlatt's Judgment, who had found that the grants had to be brought into account for taxation purposes as an annual profit or gain, by stating that " the moneys in question received by the Respondents from the Unemployment Grants Committee were not profits or gains of the trade carried on by the Dock Company within the meaning of the Income Tax Acts."

The thanks of the Association are due to the Members who shared the expense of briefing Sir John Simon to lead for the Respondents in the Court of Appeal and Mr. Tyldesley Jones, who, on Sir John joining the present Government, led in the House of Lords.

British Standards Institution.

(formerly the British Engineering Standards Association).

The following draft Specifications prepared by Committees of the Standards Institution, on which this Association is represented, were circulated to members during the year for their comments:—

1. C.C. (ME).—Draft Specification for Electric Overhead Travelling Cranes (Circular 233).
2. C.C. (ME) 5013.—Draft Specification for the quality of Pitched or Calibrated Wrought Iron Load Chain (Circular 240).
3. C.C. (ME) 5019.—Draft Specification for Rope Terminal Attachments for General Engineering Purposes (Circular 241).

The undermentioned specifications were completed and published during the year:—

No. 408.—Ships Cargo Lifting Blocks (Circular 238).
No. 431.—Manilla Ropes for General Purposes (Circular 251).
No. 432.—Manilla Ropes for Wall Drilling (Circular 251).

The draft of the first of these was circulated in 1929 and of the second in 1930.

An outline of the work done by the Association and the objects the Institution has in view are explained in " The Times " of 8th January, 1932.

Buoyage and Lighting of Coasts.

League of Nations.

The proceedings at the International Conference at Lisbon in October, 1930, were referred to at some length in the Report for 1930, and following this Conference the Board of Trade held a meeting of the interested parties in this country in February to consider what steps should be taken with a view to furthering the adoption of a uniform system of Buoyage for maritime countries.

The Conference included representatives of the Admiralty, Colonial Office, India Office, the High Commissioners for Australia, Canada, the Irish Free State and New Zealand, the three General Lighthouse Authorities (Trinty House, Northern Lights and Irish Lights), Local Lighthouse Authorities, the Chamber of Shipping, and Liverpool Steam Ship Owners' Association, and was thus representative of all interests.

After the Conference the Board of Trade prepared " A Proposed New System of Buoyage for the British Isles " to submit for the consideration of the next International Conference.

These proposals follow those put forward by the British Delegation at Lisbon in September, 1930. The proposals were considered, and approved, at a well-represented meeting of Local Lighthouse Authorities convened by the Association on the 9th July.

The Board of Trade have now forwarded the " Proposed New System of Buoyage " to the Foreign Office for transmission to the countries represented at Lisbon for their consideration between now and the resumption of the Conference.

Water Transport Premium.

No award was made in respect of the 1931 competition and the Committee has in conjunction with the Adjudicators and the Institute of Transport (through their Secretary, Mr. Winter Gray) revised the conditions governing the prize for the coming year.

The new conditions will be set out in full in the Institute's Journal for February. It is sufficient to state here that for 1932 there will not as in the past be a set subject for the competition. The writers of papers or essays will be free to choose any subject relating to Dock, Harbour or Conservancy matters. There will be two medals available, viz., a gold medal for the best paper presented to or read before the Institute during the year and a silver medal to the writer of the best essay submitted in competition for that medal.

International Labour Conference, Geneva, 1929.

Convention for Protection against Accidents of Dockers employed in Loading and Unloading Ships.

It was mentioned in the Report for 1930 that at the request of the Home Office the differences between the Convention agreed to at Geneva in 1929 and the British Regulations (S.R. and O. No. 231 of 1925) were being considered by a Committee with the Chief Inspector of Factories as Chairman.

From these deliberations it appeared that the Convention could not be ratified by this country unless amendments were made in the British Regulations and that such amendments would give rise to serious difficulties.

The British Government with the German Government, who were in the same difficulty, have therefore asked the Governing Body of the International Labour Organisation to refer these points for consideration at the 1932 Conference with a view to having the Convention amended, as in its present form they found it impossible to ratify the Convention.

River and Estuary Pollution.

The following letter was received from the Ministry of Transport on the subject of investigating these problems, and the Association's reply is also given:—

Ministry of Transport,
Whitehall Gardens, S.W.1,
14th April, 1931.

Sir,—I am directed by the Minister of Transport to inform you that he has been consulted by the Department of Scientific and Industrial Research with regard to a suggestion, of which the Dock and Harbour Authorities' Association may be aware, that the Water Pollution Research Board might usefully include, either in their present survey of the River Tees or in some

Dock and Harbour Authorities' Association- -continued

subsequent investigation of pollution problems, a study of the process and extent of deposition of mud or other matter resulting from the discharge of sewage into a tidal estuary.

The Minister would be glad to learn whether the dock and harbour authorities would be in favour of such an investigation being made, and, if so, to what extent they would be prepared to contribute to its cost.

I am, Sir,
Your obedient Servant,
(Signed) E. W. ROWNTREE.

The Secretary,
Dock and Harbour Authorities' Assn.,
13, Victoria Street, S.W.1.

Dock and Harbour Authorities' Association,
13, Victoria Street, S.W.1,
July 29th, 1931.

Sir,

Pollution of Rivers.

Your letter of the 14th April has been considered by the Executive Committee of this Association and they desire me to thank the Minister of Transport for putting forward the suggestion that the Water Pollution Research Board of the Department of Scientific and Industrial Research should in connection with their present survey of the River Tees or in some subsequent investigation of Pollution problems, study the process and extent of deposition of mud or other matter resulting from the discharge of sewage into a tidal estuary.

The Executive Committee consider that the investigation of such questions will be of value to the community and should tend to the benefit of navigation, and they desire me to say that they would welcome an inquiry which would result in a comprehensive Report of scientific and practical men which should be of considerable advantage to those bodies whose duty it is to study the regime and the varying characteristics of the respective ports and estuaries of the country with a view to maintenance and improvement.

As to the last paragraph of your letter, you will appreciate that the supply of information and data to the Pollution Research Board and assisting them in their inquiries and deliberations at the Ports which come under review will of itself be a material contribution to the cost of the investigation, and as an Inquiry on the lines your letter indicates will be of a national character the Association consider that the contribution of information and assistance will be as much as the Government should ask the local Port Authorities to bear.

I may say that as well as the general question there are at the present time questions affecting particular Ports, and of these the Tees, which you mention, and Liverpool, are instances.

Though the inquiries and deliberations of the Pollution Research Board on the general question will almost certainly embrace inquiries into such an estuary as the Mersey, yet both there and elsewhere there may be questions which will require consideration and deliberation by the various local bodies before they are in a position to place proposals before the Pollution Research Board. Here again the cost of obtaining valuable and comprehensive scientific reports on sewage discharge (such as the Mersey Docks and Harbour Board have obtained) is of itself a material contribution to the cost of any inquiry into the question in general or as to any Port in particular.

I am, Sir,
Your obediant Servant,
(Signed) W. C. THORNE.

The Secretary,
Ministry of Transport,
Whitehall Gardens, S.W.1.

(*To be continued.*)

Canadian Notes

Port Facilities at Churchill, Manitoba.

The Dominion Department of Railways and Canals at Ottawa, in an announcement as to the facilities to be available next summer for shipping interests at the new Port of Churchill, Manitoba, states that there will be a wharf 1,855-ft. in length, with 30-ft. of water at low tide. The grain elevator will have a capacity of 2,500,000 bushels with a conveyor system along the wharf for loading ships. There will be a freight shed on the wharf with provision for the storage of 40,000 tons of coal, two locomotive cranes being provided for the handling of 1,000 tons of coal per day in connection with ships' tackle. Cattle can be loaded from railway cars brought alongside the ships, there being necessary service tracks on the wharf and in the shed, whilst train make-up yards are conveniently located. Fresh water will be provided on the wharf.

The direction-finding radio station at Churchill, coast radio station at Chesterfield Inlet, and three direction-finding stations in Hudson Strait will assist in navigation to Churchill. In addition, there are certain other aids to navigation in the way of lights and an ice patrol in the straits. The season of navigation is probably from July 20th to October 20th plus or minus ten days at either end.

The Port of Churchill came into use temporarily in September last, when two steamers were loaded with test grain shipments to Europe. The vessels each carried about 270,000 bushels and loading was accomplished without difficulty in about 38 hours, the first testing of the new grain handling facilities. This year the port and its grain handling and other wharfage facilities will go into regular operation.

Increased Export Trade at Vancouver, B.C.

During a year in which world trade declined heavily, the Port of Vancouver, B.C., secured increased export trade and suffered only moderate declines in import traffic. Imports of cargo fell, however, from 1,516,685 tons in 1930 to 1,366,962 tons last year. The total external trade reached 4,216,737 tons, or slightly below the 1930 total of 4,356,160 tons.

Grain shipments during the year totalled 70,696,935 bushels, or approximtaely 7 million bushels more than in 1930. However, flour shipments, while greater than for any year prior to 1928, dropped slightly from 1,201,956 barrels in 1930 to 1,058,325 barrels last year. Pulp and paper shipments rose from 278,818 tons to 290,860 tons, a figure higher than that for any year previously except 1928.

The number of deep sea vessels entering the port last year was 1,034, having a total tonnage of 4,084,103, as compared with 1,188 vessels with a tonnage of 4,474,225 tons in 1930. A tendency towards larger ships is shown by an analysis of these figures.

Dealing with British Columbia ports generally, the report shows that New Westminster dealt with 301 deep sea vessels last year as compared with 297 in 1930. The principal commodity handled there, namely, lumber, was down from 188 million ft. to 165 million ft., whilst about two-thirds of the shipments of lead and spelter from the province were handled by this port, the total trade on which aggregated 431,194 tons, of which imports totalled only 24,227 tons.

The total lumber shipments from British Columbia ports last year aggregated 619 million ft., as compared with 817 million ft. in 1930. Canned salmon shipments were also well maintained despite the much smaller pack, and exports to Great Britain showed a decided increase, rising from 258,378 cases to 430,239 cases. Total exports of canned salmon reached 979,787 cases, as compared with 1,021,640 cases in 1930.

The remaining principal ports of British Columbia listed in order of total trade for 1931 were: Alberni, 145,707 tons; Victoria, 119,377 tons; Chemainus, 105,610 tons; Ocean Falls, 92,455 tons; Powell River, 77,648 tons; Quatsino, 63,114 tons; and Prince Rupert, 35,631 tons.

Grain Exports from Vancouver, B.C.

According to the Vancouver correspondent of the "Financial Times" (Montreal), Vancouver was, during the crop year 1930-1931, the chief grain exporting port on the North American Continent. During the brief span of about ten years, therefore, Vancouver's wheat trade has risen from practically nil to a position of commanding importance in the world's grain markets.

During the crop year in question, grain handling at Vancouver surpassed the volume at Montreal for the first time. Montreal during the crop year 1930-1931 exported 55,246,217 bushels of Canadian grain and 9,841,660 bushels of United States grain, making a total of 65,087,877 bushels, whilst Vancouver shipped 74,603,612 bushels of Canadian grain.

The traffic through the port has, of course, declined during the twelve months owing to the reduced crops on the prairies of Western Canada; in 1928, for instance, Vancouver handled 96,712,000 bushels, 26 per cent. of the Canadian total. During the following year Vancouver's grain exports totalled 72,894,000 bushels, or 36 per cent., of Canada's total exports.

Italian Harbour Affairs

ACCORDING to statistics which have just been published by the Consiglio Provinciale dell 'Economia Corporativa (Chamber of Commerce and Industry) at Trieste, shipping at that port during the month of February, 1932, included the following items:—

		FEBRUARY 1932	FEBRUARY 1931
ARRIVALS.			
By rail (Centals)	...	435,788	584,359
By sea ,,	...	1,460,630	1,255,843
Centals	...	1,896,418	1,840,202
CLEARANCES.			
By rail (Centals)	...	709,142	833,302
By sea ,,	...	403,093	472,532
Centals	...	1,112,235	1,305,834
TOTAL.			
By rail (Centals)	...	1,144,930	1,417,661
By sea ,,	...	1,863,723	1,728,375
Centals	...	3,008,653	3,146,036

Shipping at Trieste during the first two months of this year included the following figures:—

ARRIVALS.			
By rail (Centals)	...	882,806	1,269,027
By sea ,,	...	2,702,719	2,648,712
Centals	...	3,585,525	3,917,739
CLEARANCES.			
By rail (Centals)	...	1,505,388	1,704,287
By sea ,,	...	833,843	999,011
Centals	...	2,340,231	2,703,298
TOTAL.			
By rail (Centals)	...	2,389,194	2,973,314
By sea ,,	...	3,536,562	3,647,723
Centals	...	5,925,756	6,621,037

It will be noticed that traffic as a whole during the month of February has shown a decline of about 140,000 centals, but arrivals and clearances by sea have shown an increase of about 140,000 centals, due chiefly to the larger arrivals by sea. Also figures for the period from January to February, 1932, are showing the same tendency.

Traffic at Venice has shown a decreasing tendency during the month of February, 1932, as is shown by the following figures published by the "Bollettino del Provveditorato al Porto di Venezia":—

	Imports Tons	Exports Tons	Total Tons
February, 1932	145,845	33,731	179,576
,, 1931	155,964	53,840	209,804
	10,119	20,109	30,228

Total shipping at Venice during the month of February, 1932, shows a decline of 30,228 tons, corresponding to 14.41 per cent. in respect to the month of February, 1931. Goods unloaded have shown a decline of 10,119 tons, viz., 6.49 per cent., due mainly to the smaller arrivals of coal for the Italian State Railways Administration (24,500 tons), of chemical fertilisers (4,600 tons), and of pyrite (4,100 tons). These decreases have been compensated by larger arrivals of cereals (9,700 tons), metals (5,000 tons), oils (3,900 tons), hemp (2,100 tons) and general cargo (2,381 tons). The decline in the volume of goods shipped, amounting to 20,109 tons and corresponding to 37.34 per cent. in respect to the month of February, 1931, is wholly due to the smaller shipments of pyrite ashes.

In connection with the situation of shipping at Venice it ought to be noted that in spite of the revival of trade at Trieste (writes the "Bollettino del Provveditorato al Porto di Venezia") shipping at Venice has also maintained during 1931, with 2,794,018 tons, second place among Italian ports, though the maritime traffic in the town of the lagoons has shown a decline of 168,268 tons. It may be interesting for this reason to consider the position of the various items of imports, which may be summarised as follows:—

	1930 Tons	1931 Tons	DECLINE Tons	DECLINE Per cent.
Coal	1,233,091	1,161,363	71,728	5·75
Chemical Fertilizers	213,762	121,735	92,027	43·00
Cereals	287,822	227,358	60 464	21·18
Salt	76,012	62,162	13,850	18·22

The growing importance of shipping at the Marghera Docks (Industrial port) of the Port of Venice should be noted, as outlined in the following figures: —

	Imports Tons	Exports Tons	Total Tons
1929	579,461	140,485	719,946
1930	682,016	142 297	824,313
1931	705,536	159,194	864,730

About two-thirds of this traffic is due to the progress of industries in the Marghera Docks, thus showing the importance of the scheme, as outlined by Count Volpi di Misurata, the former Italian Minister for Finance, who suggested the new Port of Venice. Finally, in connection with shipping at Venice, it may be interesting to consider the following figures regarding Austrian transit trade through Venice:—

	1931 Tons	1930 Tons
Wheat	9,668	4,772
Maize	6,548	791
Oats, Barley etc.	573	175
Cotton	726	885
Sulphur	281	865
Amiant	425	—
Oil	6	11
	18,227	7,499

The Consorzio Autonomo del Porto di Genova has again reduced unloading charges for the use of the electric coal elevators on the Bacino Vittorio Emanuele III., and it has been decided to increase the facilities existing on the Ponte Biagio Assereto. Furthermore, the new warehouses on the Ponte Andrea Doria have been placed at the disposal of the Compagnia Italiana Transatlantica, of the Società Italiana di Navigazione Florio and of the Società Italiana dei Servizi Marittimi, while the warehouses on the Ponte Colombo have been placed at the disposal of the Navigazione Libera Triestina, rendering possible direct loading from quay to ship and *vice versa*, thus avoiding the use of lighters. Special regulations and charges have been issued by the Consorzio Autonomo del Porto for the operation of these warehouses.

Concerning the situation in the Port of Palermo, it is now considered that the works under construction in that port will be of no use to the future of shipping unless they are completed by means of the construction of the connection between the outer breakwater and the so-called Northern mole in such a way as to form an outer harbour with sufficient depth so that ships such as the "Conte di Savoia" and the "Rex" might call at Palermo without any danger. It is also necessary that mechanical unloading facilities and warehouses should soon be provided on the new quayage which has just been completed at Palermo.

According to statistics which have been supplied by the Chamber of Commerce and Industry at Tripoli (Lybia), shipping at that port during the month of January, 1932, included the arrival of 46 ships, representing 73,466 net registered tons, carrying 12,136 tons of goods and 1,279 passengers, and the clearance of 44 ships representing 71,583 net registered tons, which carried 2,954 tons of goods and 930 passengers. Total shipping at Tripoli for January is 90 ships arrived and cleared, representing 145,049 net registered tons, with 15,090 tons of goods and 2,209 passengers. The figures for January, 1931, showed the arrival of 54 ships, representing 68,718 net registered tons, carrying 14,222 tons of goods and 1,578 passengers; and the clearance of 57 ships, representing 69,105 net registered tons, carrying 2,441 tons of goods and 1,193 passengers, with a total traffic of 111 ships arrived and cleared, representing 137,823 net registered tons, 16,663 tons of goods and 2,771 passengers. It will be seen that shipping in the Port of Tripoli has been influenced by the development of the world-wide economic crisis. The construction of the new Port of Tripoli has made considerable progress, and the building of the new jetty will enable sailing vessels, when the large mole is wholly occupied, to unload in the fairway by means of lighters. The new quay measures about 110 metres in length at a depth varying from 2 to 4 metres. Behind this quay there will be an available space of about 10,000 square metres, suitable for storage purposes and for connection with the main jetty of the Port of Tripoli.

In connection with the trade at Fiume, coal imported there from foreign countries is not subject to the 10 per cent. *ad valorem* duty which is being paid at other Italian ports. It may be interesting to consider the following figures regarding trade at Fiume and Sussak in the course of the past few years:—

	Fiume Tons	Sussak Tons
1913	2,108,000	
1927	782.000	438,000
1928	881,000	564,000
1929	898,000	634,000
1930	777,000	701.000
1931	611,000	560,000

In the course of the past few weeks the Italian Government has again been urged to take up the question of increasing transit trade through Genoa, and both the Press and leading experts have taken up the matter. Honourable Corrado Marchi, President of the National Fascisti Federation for Transports and Inland Navigation, has delivered a lecture at Milan pointing out the importance of the construction of a new Milan-Genoa railway for the benefit of the Port of Genoa. In other quarters it has been urged that the Italian State Railways Administration should adopt special rates for goods to and from Switzerland.